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## **Energy & Technology Committee**

**March 16, 2010**

Good afternoon Senator Fonfara, Representative Nardello and other distinguished members of the Energy and Technology Committee. My name is Patricia Wrice, and I am the executive director of Operation Fuel and a member of the Low Income Energy Advisory Board. I currently chair the DPUC Subcommittee of the Low Income Energy Advisory Board. The committee has been meeting for over three years. I am testifying in support of **Raised Bill No.460**

First, I would like to commend the legislature for its leadership in addressing the ever complicated energy crisis facing the State of Connecticut. We all know that energy costs are at an all-time high, and Connecticut has the highest energy rates in the continental United States. The gap between what households can afford to pay and their actual energy costs, continues to widen as the cost of energy increases. As a result, more families are at risk of having to make choices between adequate nutrition, medical care, housing, and other basic necessities in order to pay home energy bills.

The high cost of energy causes energy blackouts due to termination of service. Many low income residents forced to triage their energy burdens face sitting in the dark between May and November 1<sup>st</sup> when the winter protection program ends. This does not have to be the case if we had discounted utility rates for low income customers that other states have such as New Hampshire, New Jersey, and Ohio. When deregulation passed in Maryland, appropriate action was taken to protect Maryland's most vulnerable residents.

These programs have been operating for several years and evaluations have shown that they are effective and do work. They cost money and we recognize that someone has to pay the bill, but I believe the costs are minimal and are necessary in order to ensure low-income families don't have to make difficult choices.



Another issue for concern is the outstanding balances that are carried over from year to year. With increases in energy costs, these balances continue to grow. The arrearage forgiveness programs, or matching payment plans, do not provide enough to wipe away these huge debts.

After researching Discounted Rate Programs in other states, the DPUC Subcommittee of the Low Income Energy Advisory Board, in its discussion about legislation regarding a discount utility rate for low-income households in Connecticut, decided upon the following principles:

- 1) Maximum poverty threshold (income limit) of 150%
- 2) Application of the discount rate to households' complete energy burden
- 3) A "clean slate" component to the program, in which high arrearages can be paid and clients/customers can begin the discount rate program with a zero balance.
- 4) A sunset provision for other utility company arrearage forgiveness programs
- 5) A comprehensive communication/education plan that is tied to conservation and weatherization programs
- 6) Utility company cost recovery through the system benefit charge (SBC) or gas rates
- 7) Provision of case management services for clients
- 8) DPUC evaluation of additional requirements for eligibility: conservation load management (CLM), time-of-use rates and alternate energy suppliers
- 9) Consideration of a low-income rate for deliverable fuels

The proposed legislation calls for the DPUC to oversee the development and implementation of the discount rate program. If the bill passes the CT General Assembly and is signed into law by Governor Rell, the DPUC Subcommittee, as part of the LIEAB, would like to formally weigh in on the further development, implementation and evaluation of the discount rate program.

Thank you. I will be happy to answer any questions. I've also attached a report prepared for our committee by APPRISE.



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**DATE:** December 28, 2007  
**TO:** Pat Wrice, Operation Fuel  
**FROM:** David Carroll, Jackie Berger, and Roger Colton  
**SUBJECT:** Sponsor Report on Study of Ratepayer Funded Low-Income Energy Programs

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Operation Fuel is a sponsor for the national multi-sponsor study of ratepayer-funded low-income energy programs. The final study report – *Ratepayer Funded Low-Income Energy Programs: Performance and Possibilities* – is complete. The purpose of this memo is to furnish information on the findings from the study and suggestions for how the study can be used by Operation Fuel other interested parties in Connecticut as they consider ways to improve to ratepayer funded low-income affordability and energy efficiency programs in Connecticut.

## Purpose

The purpose of the national multi-sponsor study is to:

- Develop information on the unmet energy needs of low-income households in the sponsor states.
- Identify the program designs and operational procedures that have been effective in meeting the energy needs of low-income households.
- Develop an understanding of the legal and regulatory framework under which ratepayer funded low-income energy programs have been effectively developed.

The purpose of this memo is to furnish Operation Fuel with specific information about the implications of the study findings. Specific issues covered include:

- Energy Needs – What are the energy needs of low-income utility customers in Connecticut? How well do the current Connecticut programs meet the energy needs of low-income utility customers?
- Program Design/Implementation – What are the benefits and limitations of the program model(s) used by Connecticut? What program models have implemented in other states, and how have they performed? Which program models might be most effective at meeting Connecticut's goals?

Operation Fuel can use this memo as a foundation for policy discussions with state agencies, local program partners, low-income advocates, and other interested parties regarding the need and possible designs for ratepayer funded low-income energy programs.

## **Low-Income Expenditures, Affordability, and Usage Issues**

In this memo we furnish summary information on the energy needs of low-income households in Connecticut. More detailed information is available in the *Connecticut State Appendix* of the main study report.

### *Energy Expenditures*

In Connecticut, households with incomes at or below 150% of the HHS Poverty Guidelines are income-eligible for LIHEAP. A single-person household with an income of \$14,355 or less is eligible for LIHEAP (2005). For a family of four, the income limit is \$29,025 (2005). The following statistics help to define the characteristics of the income-eligible population in 2005.

- 188,138 households were income-eligible for LIHEAP (14% of all Connecticut households).
- 159,297 low-income households paid electric and/or gas bills directly to a utility.
- The estimated median electric and gas burden for low-income households was about 16.4% of income.
- The estimated median baseload electric bill was \$811, and the estimated median electric burden was 8.3% of income.
- For households that heated with electricity, the estimated median electric bill was \$1,083, and the estimated median electric burden was 10.9% of income.
- The estimated median gas heating bill was \$920, and the estimated median gas burden was 10.1% of income.

The statistics show that Connecticut households had energy bills and energy burdens above the national average. The estimated median low-income energy burden at the national level for 2005 was 9.9% of income. The median energy burden for non-low-income households was 2.3% of income.

### *Energy Affordability – Gross Energy Need*

Analysts have developed two important indicators of energy affordability – an affordable energy burden and a high energy burden.

- **Affordable Energy Burden** - Roger Colton of Fisher, Sheehan, and Colton has recommended using an affordability standard of 6% of income. He cites national research that suggests that a household can afford to spend about 30% of income on shelter costs and his own research that shows that about 20% of shelter costs are used for energy bills. Based on those statistics, he suggests that the maximum affordable level of energy expenditures for the average household would be about 6% of income.
- **High Energy Burden** – APPRISE has proposed an approach for defining “high energy burden” using a similar model. APPRISE notes that some researchers (Dolbeare, 2001) have defined a severe shelter burden as having shelter costs that are 50% of income or

more. APPRISE research shows that about 20% of shelter costs are for energy expenditures. Using that approach, APPRISE has defined a high energy burden as 10% of income.

Individual households may be able to pay more or less than those targets. For example, an elderly household that has relatively low current costs for housing because the mortgage is paid off might be able to pay a slightly higher amount for energy. At the same time, another elderly household that has significant costs for medicine or home health care might find even 6% too much to pay for energy. However, these statistics are useful as an overall indicator of need.

Using data for Connecticut from the American Community Survey (ACS), we developed estimates of the total need by low-income households for assistance with electric and gas bills in Connecticut. In this analysis, "need" for each household is defined as the difference between a household's actual energy expenditures and a targeted affordability standard. "Energy Gap" is defined as the total need for all low-income households. To give policymakers some understanding of the range of possible estimates of need, we have computed the Energy Gap using three different affordability standards – 5% of income, 10% of income, and 15% of income.

Table 1 shows that about 149,000 low-income utility customers have an aggregate energy bill of 5% or more, and that about \$192 million in energy assistance would be needed to reduce the energy burden for all of those households to 5% of income. About 84,000 low-income utility customers are eligible for program benefits at the 15% need standard and about \$104 million in energy assistance would be needed to meet the needs of all of those customers.

**Table 1**  
**Estimates of Energy Gap – 5%, 10%, and 15% Need Standards**

<b>Need Standard</b>	<b>Aggregate Low Income Energy Bill (millions)</b>	<b>Households in Need (Burden Exceeds Standard)</b>	<b>Energy Gap (millions)</b>
<b>5% of Income</b>	\$262	149,446	\$192
<b>10% of Income</b>	\$262	119,895	\$154
<b>15% of Income</b>	\$262	84,456	\$104

In the abstract, it is difficult to get a good sense of the meaning of the three different energy need standards. One way to make the standards more meaningful is to examine the implications of each standard for the average household in Connecticut. In 2005, the median household income in Connecticut was \$60,941. Table 2 shows the annual and monthly energy bill that the median household would pay if they had energy burdens at each of the three need standards. From this table, it is clear that even the 15% of income need standard is quite high. If the average household in Connecticut paid 15% of income for electric and gas service, their combined monthly bill would be \$761 per month. The 5% need standard seems much more affordable. If the average household in Connecticut paid 5% of income for electric and gas service, their combined monthly bill would be about \$274 per month.

**Table 2**  
**Energy Bills for Median Connecticut Household – 5%, 10%, and 15% Need Standard**

Need Standard	Median Income	Annual Energy Bill at Need Standard Level	Monthly Energy Bill at Need Standard Level
5% of Income	\$60,941	\$3,047	\$254
10% of Income	\$60,041	\$6,094	\$508
15% of Income	\$60,041	\$9,141	\$761

### *Energy Usage*

It is somewhat more challenging to estimate the need for energy efficiency programs. The literature on energy efficiency programs demonstrates that programs that target high users achieve the highest savings levels and are the most cost-effective. For electric baseload, programs that target households using 8,000 kWh or more per year are the most cost-effective. For electric heating, programs that target households using 16,000 or more kWh per year are most cost-effective. For gas heating, programs that target households that use 1,200 or more therms per year are most cost-effective.

Our primary state-level data source, the ACS, does not ask respondents to report on the amount of electricity or natural gas that they use. However, we can develop a proxy for usage based on the respondent's estimate of the household's electric and gas bill. [Note: EIA reports that, in 2005, the average Connecticut electricity price was 13.64 cents per kWh and the average gas price was \$1.624]. Using the ACS data, we developed estimates of the number of households that would be eligible for energy efficiency programs using the cost-effectiveness targets. Table 3 shows that 36% of households could be targeted for high baseload bills, 21% could be targeted for high electric heat bills, and 23% could be targeted for high gas usage. Clearly, there is significant potential for ratepayer funded energy efficiency programs to improve energy affordability for low-income households in Connecticut.

**Table 3**  
**Need for Energy Efficiency Programs for Low-Income Households (2005)**

Group	Number of Households with Bills	Number of Households with High Bills	Percent of Households with High Bills
Electric Baseload Services <sup>1</sup>	124,122	44,408	36%
Electric Heating Services	33,800	7,040	21%
Gas Heating Services	51,597	22,844	23%

<sup>1</sup> For households that report electric and natural gas expenditures as one bill, we allocated half of the cost to electricity and half of the cost to natural gas.



## Connecticut Energy Assistance Programs

In this memo we furnish summary information on the current energy assistance programs in Connecticut. More detailed information is available in the *Connecticut State Appendix* of the main study report.

### *Low-Income Affordability Programs*

There are currently two sources of funding for low-income energy affordability programs in Connecticut – LIHEAP and electric and gas ratepayer funds.

- LIHEAP – In federal FY 2005, Connecticut received about \$47 million in LIHEAP funding from the federal government.
- Electric and Gas Ratepayer Funds – In FY 2005, electric and gas utility arrearage forgiveness programs furnished about \$14 million in benefits to eligible households.

The LIHEAP program has two energy assistance program components – heating assistance and crisis assistance. In 2005, about \$27 million was allocated to heating assistance and about \$10 million was allocated to crisis assistance. Since 65% of low-income households heat with electric or gas, we will assume that about \$24 million of the \$37 million in benefits was available to customer that heat with electric or gas.

- Heating Assistance – The heating assistance program offered a lump sum benefit to about 62,000 households, with an average benefit of about \$434.
- Crisis Assistance – The crisis assistance program made winter crisis payments to about 19,000 households, with an average benefit of about \$529.

The Connecticut ratepayer funded programs furnish arrearage forgiveness to low-income households. When a household enrolls in the program, the household must commit to making payments for their current bills plus part of their outstanding arrears. If the customer makes all required current bill and arrearage payments by certain target dates (April 31 for the winter program and October 31 for the summer program) the utility will match the arrearage amount that the customer paid (including the amount of energy assistance) with a bill credit.

There is limited information on the number of customers served by the program and the number who are successful in meeting the requirements and receiving bill credits. For the 2005-2006 program year, it was reported by the Connecticut Department of Utility Control that 46,572 customers enrolled in the program with about \$59 million in arrears. Since the utilities have reported that customers received about \$14 million in benefits, we can calculate a 24% success rate for the program. Assuming that 24% of the customers were successful, we can infer that about 11,000 customers received benefits of about \$1,272 per customer. [Note: Better reporting by the utilities would improve understanding of the program.]

### *Energy Gap*

Using the ACS data, we can make estimates of the participation rates for Connecticut's affordability programs.

- LIHEAP – About 159,000 households were income-eligible for LIHEAP and pay a utility bill. In 2005, about 62,000 households (39%) received LIHEAP benefits.
- Arrearage Forgiveness Program – About 159,000 households are income eligible for the arrearage forgiveness program and pay a utility bill. About 47,000 low-income customers were reported to have enrolled in the arrearage forgiveness program, about 30% of all low-income customers. About 11,000 customers we estimated to have received benefits through the program, about 24% of enrolled customers and about 7% of all low-income customers.

By comparison, we estimate that about 84,000 low-income customers (53%) paid 15% or more for their electric and gas service during 2005.

In total, Connecticut made about \$38 million available for energy assistance for electric and gas customers. In Table 4, we show what share of the energy gap can be covered by the available energy assistance funding. The 2005 funding covered over one-third of the total energy gap at the 15% standard for 2005. However, the 2005 funding would have only covered one-fifth of the energy gap at the 5% standard for 2005.

**Table 4**  
**Coverage of Energy Gap by Current Connecticut Programs (2005)**

Need Standard	Aggregate Low Income Energy Bill (millions)	Households in Need (Burden Exceeds Standard)	Energy Gap (millions)	Coverage of Energy Gap
5% of Income	\$262	149,446	\$192	20%
10% of Income	\$262	119,895	\$154	25%
15% of Income	\$262	84,456	\$104	37%

#### *Low-Income Energy Efficiency Programs*

There are currently three sources of funding for low-income energy efficiency programs in Connecticut – WAP, LIHEAP, and ratepayer funds.

- WAP – In federal FY 2005, Connecticut received about \$2.5 million from the federal Weatherization Assistance Program.
- LIHEAP – In federal FY 2005, Connecticut allocated about \$1.25 million in LIHEAP funding for heating system replacement.
- Ratepayer Funds – In 2005, Connecticut utility energy efficiency programs were funded at a level of about \$7.2 million.

In total, Connecticut made about \$11 million available for low-income energy efficiency programs. NASCSP estimated that about 10,300 households were served with weatherization services in 2005. Since we estimated that there were about 30,000 low-income households with high electric or gas heating usage, about 33% of households in need could be treated each

year. The WRAP and UI Helps programs reported delivering electric services to about 13,600 customers. Since we estimated that about 44,000 households had high baseload electric bills, about 31% of the households in need could be treated each year. The energy efficiency funding in Connecticut covers a large share of low-income households. However, the level of investment per home may be insufficient to have a significant impact on energy affordability for participating households.

### **Issues with Connecticut Energy Assistance Programs**

Based on our review of the Arrearage Forgiveness programs we have identified some important issues that should be addressed by policymakers in Connecticut.

- *Affordable Payments* – The programs do not attempt to compute an affordable payment for participating customers, nor do they target the highest program benefits to the lowest income or highest burden customers.
  - *Original Design* – Until recently, customers participating in these programs were required to pay their current bill plus some amount toward their arrearage in order to earn program benefits. The program design limits benefits to those households who can afford to pay current bills. As a result, it is likely that only the highest income program participants actually receive program benefits. Most ratepayer funded affordability programs in other jurisdictions give customers either a discount on the current bills or a fixed annual credit to improve the affordability of current bills. Moreover, the lowest income customers are usually assigned the highest level of benefits.
  - *Alternative Design* – A recent innovation in the program allows lower income customers to pay an amount lower than their current budget bill. However, the difference between the budget amount and the payment amount is added to the customer's arrearages. This program design has been used for more than 20 years in Ohio. As a result, many Ohio PIPP program participants have arrearages that exceed \$5,000.
- *Arrearages* – The programs appear to be successful in helping some low-income customers to reduce or even eliminate their preprogram arrearages. However, the program is only successful in eliminating about one-fourth of the arrearages that are enrolled in the program. Moreover, the program design suggests that the highest income program participants are most likely to receive program benefits.
- *Budget Counseling* – The available programs do not allocate funds for working with clients to improve their ability to manage their budgets and access other sources of assistance. Particularly if the programs retain the design that is focused on past arrears rather than current bill affordability, it is important for customer to get assistance in learning how to budget more effectively for paying bills and in identifying other sources of income.
- *Energy Efficiency* – The Process Evaluation of the ratepayer funded energy efficiency programs recommended that program benefits be targeted to the lowest income customers and that a higher level of investment in each home would have a greater

impact on energy affordability for low-income households. It also would seem to be appropriate to target benefits to participants of the Arrearage Forgiveness programs in order to help them better afford their current energy bills.

Operation Fuel is attempting to find program design solutions that can address these concerns.

## Design Options for Connecticut Energy Assistance Programs

In this section of the memo, we examine the choices that Connecticut policymakers will need to make as they attempt to develop more effective ratepayer funded affordability and energy efficiency programs. Where applicable, we draw upon findings from the national study.

### *Program Funding Levels*

In the needs assessment section of this memo, we identified the number of households in need and the energy gap at various need standard levels. As they consider different need standards, Connecticut policymakers will need to consider the funding levels required to serve households at each need standard level.

In other jurisdictions, electric affordability programs target affordability standards of 3%, 5%, or 7% of income. In Connecticut, 158,000 income-eligible households have an electric bill. Of those, about 78% use electricity for baseload only, while 22% use electricity for heating. Of the 124,000 baseload electric customers, 114,000 have an electric energy burden that exceeds 3% of income, 89,000 have an electric energy burden that exceeds 5% of income, and 68,000 have an electric energy burden that exceeds 7% of income. The total baseload electric energy gap at the 3% need standard is about \$82.9 million, the energy gap at the 5% need standard is about \$62.1 million, and the energy gap at the 7% need standard is about \$48.2 million.

**Table 5**  
**Estimates of Baseload Electric Energy Gap – 3%, 5%, 7% Need Standards**

Need Standard	Aggregate Low Income Baseload Electric Bill (millions)	Households in Need (Burden Exceeds Standard)	Electric Baseload Energy Gap (millions)
<b>3% of Income</b>	\$124	113,811	\$82.9
<b>5% of Income</b>	\$124	88,740	\$62.1
<b>7% of Income</b>	\$124	67,895	\$48.2

LIHEAP energy assistance is used for space heating and space cooling. So, LIHEAP funding would be allocated to assistance with gas heating and electric heating bills, and would not be available to address baseload electric energy affordability issues. From that perspective, an electric baseload affordability program would need to be funded at a level that would cover the total energy need. In targeting an appropriate funding level, Operation Fuel should consider the following:

- If 100% of eligible households participated in an electric affordability program at the 3% need standard level, the funding required could be as much as \$82.9 million.

- Most programs of this type tend to reach only about 50% of eligible households. So, a more realistic estimate of the cost for this program might be \$41.5 million.
- Electric utilities find that they are unable to collect a certain share of the bills rendered to low-income customers. To the extent that those uncollectibles are already reflected in rates and are reduced through the implementation of such a program, the net cost of the program to ratepayers is less than the cost of an electric affordability program.
- The average annual cost per household of a program that serves 50% of the eligible households at the 3% need standard would be about \$18 per year or about \$1.50 per month. [Note: We assume that there are about 1.3 million residential electric ratepayers in Connecticut. We assume that the residential sector represents about one-third of total electric usage and that all classes pay for the costs of an electric affordability program.  $1/3 * \$41.5 \text{ million} / 1.3 \text{ million residential ratepayers} = \$18$ ]

In other jurisdictions, electric heating affordability programs target affordability standards of 6%, 10%, or 14% of income. In Connecticut, 158,000 income-eligible households have an electric bill. Of those, about 78% use electricity for baseload only, while 22% use electricity for heating. Of the 34,000 electric heating customers, 26,000 have an electric energy burden that exceeds 6% of income, 19,000 have an electric heating energy burden that exceeds 10% of income, and 14,000 have an electric heating energy burden that exceeds 14% of income. The total electric heating energy gap at the 6% need standard is about \$27.8 million, the energy gap at the 10% need standard is about \$20.4 million, and the energy gap at the 14% need standard is about \$16.0 million.

**Table 6**  
**Estimates of Electric Heating Energy Gap – 6%, 10%, 14% Need Standards**

Need Standard	Aggregate Low Income Electric Heating Bill (millions)	Households in Need (Burden Exceeds Standard)	Electric Heating Energy Gap (millions)
<b>6% of Income</b>	\$47	25,891	\$27.8
<b>10% of Income</b>	\$47	19,364	\$20.4
<b>14% of Income</b>	\$47	14,454	\$16.0

LIHEAP energy assistance is used for space heating and space cooling. We estimate that electric heating households represent about 25% of all low-income households in Connecticut that have a heating bill. In 2005, Connecticut has received enough LIHEAP funding to furnish about \$37 million in home energy assistance. For purposes of this analysis, we will assume that about \$9 million is available for electric heating customers. The remainder of the energy gap would need to be funded through the electric affordability program. In targeting an appropriate funding level, Operation Fuel should consider the following:

- If 100% of eligible households participated in the electric heating affordability program at the 6% need standard level, the funding required could be as much as \$19 million (\$28 million in energy gap minus \$9 million in LIHEAP funding).

- Most programs of this type tend to reach only about 50% of eligible households. So, a more realistic estimate of the cost for this program might be \$5 million. (\$14 million in energy gap minus \$9 million in LIHEAP funding.)
- Electric utilities find that they are unable to collect a certain share of the bills rendered to low-income customers. To the extent that those uncollectibles are already reflected in rates and are reduced through the implementation of such a program, the net cost of the program to ratepayers is less than the cost of the electric PIPP.
- The average annual cost per household of a program that serves 50% of the eligible households at the 6% need standard would be about \$1.28. [Note: We assume that there are about 1.3 million residential electric ratepayers in Connecticut. We assume that the residential sector represents about one-third of total electric usage and that all classes pay for the costs of the PIPP program.  $1/3 * \$5 \text{ million} / 1.3 \text{ million residential ratepayers} = \$1.28 \text{ per year}$ ]

In other jurisdictions, gas affordability programs target affordability standards of 3%, 5%, or 7% of income. In Connecticut, 68,000 income-eligible households have a gas bill. Of those households, about 55,000 have a gas energy burden that exceeds 3% of income, about 41,000 have a gas energy burden that exceeds 5% of income, and about 30,000 have a gas energy burden that exceeds 7% of income. The total baseload gas energy gap at the 3% need standard is about \$66.5 million, at the 5% need standard is about \$49.2 million, and at the 7% need standard is about \$37.2 million.

**Table 7**  
**Estimates of Gas Energy Gap – 3%, 5%, and 7% Need Standards**

Need Standard	Aggregate Low Income Gas Bill (millions)	Households in Need (Burden Exceeds Standard)	Gas Energy Gap (millions)
3% of Income	\$90	55,315	\$66.5
5% of Income	\$90	41,004	\$49.2
7% of Income	\$90	29,830	\$37.3

LIHEAP energy assistance is used space heating and space cooling. We estimate that gas heating households represent about 40% of all low-income households in Connecticut that have a heating bill. In 2005, Connecticut received enough LIHEAP funding to furnish about \$37 million in home energy assistance. For purposes of this analysis, we will assume that about \$15 million is available for gas heating customers. The remainder of the energy gap would need to be funded through a gas affordability program. In targeting an appropriate funding level, Operation Fuel should consider the following:

- If 100% of eligible households participated in a gas affordability program at the 3% need standard level, the funding required could be as much as \$51 million (\$66 million in energy gap minus \$15 million in LIHEAP funding).

- Most programs of this type tend to reach only about 50% of eligible households. So, a more realistic estimate of the cost for this program might be \$16 million. (\$33 million in energy gap minus \$15 million in LIHEAP funding.)
- Gas utilities find that they are unable to collect a certain share of the bills rendered to low-income customers. To the extent that those uncollectibles are already reflected in rates and are reduced through the implementation of such a program, the net cost of the program to ratepayers is less than the cost of the gas PIPP.
- The average annual cost per household of a program that serves 50% of the eligible households at the 3% need standard would be about \$11. [Note: We assume that there are about 560,000 residential gas ratepayers in Connecticut. We assume that the residential sector represents about one-third of total gas usage and that all classes pay for the costs of a gas affordability program.  $1/3 * \$16 \text{ million} / 560,000 \text{ million residential ratepayers} = \$11 \text{ per year.}$ ]

### *Program Funding Sources*

One of the issues for any program is what ratepayer classes should pay for the program. In Pennsylvania, the Commission decided to pay for the ratepayer-funded low-income programs with funding from the residential class. However, most states have recognized that the costs of low-income payment problems are a more general cost of business that should appropriately be shared by all ratepayers.

Consider, for example, the costs imposed on electric distribution systems by commercial buildings. Such buildings only operate for about 10 hours per day and have peak usage in the afternoon. The costs to furnish that peak electric demand are significant. However, in most jurisdictions, including Connecticut, all ratepayers pay for that peak capacity through their rates, not just commercial building customers.

Meeting the needs of low-income residential customers and furnishing universal access to electric and gas service is generally considered to be one of the responsibilities associated with granting a franchise for electric or gas service. It is appropriate for all ratepayers to bear the costs of meeting that responsibility, since the granting of an exclusive franchise for service furnishes benefits for all ratepayers.

### *Program Targeting*

Policymakers will need to decide what types of problems they want to address. Some programs focus their funds on payment-troubled customers (i.e., those that are behind in their energy payments) while others deliver benefits to the broader population of LIHEAP recipients because of a concern for health and safety problems caused by high energy bills.

- **Targeting Payment-Troubled** – By targeting payment-troubled customers, the program is likely to have the greatest impact on utility collection costs and uncollectibles. In this way, the program can furnish benefits to both customers with affordability problems and other ratepayers. However, there is some concern that by limiting the program to payment-troubled customers, it would encourage other low-income households to stop paying their utility bills.

- **Targeting Vulnerable Populations** – By targeting vulnerable households (i.e., households with elderly individuals, handicapped individuals, or children under 5), the program is likely to have the greatest impact on public health and safety, since it would help those households to maintain a safe and healthy home environment. Since most elderly households pay their energy bills on time, this population would not be well-served by a program that targets payment-troubled households.
- **Broad-Based Program** – The advantage of a broad-based program is that a customer would not have to change his/her usage and/or payment behavior to qualify for program benefits. However, such a program might not focus program funds where they have the greatest impact on affordability issues.
- **Compromise Approach** – In Washington State, one utility program allocates program funds to three different program components – one for senior households, a second for payment-troubled customers, and a third for general distribution. Such an approach allows the program to serve all types of households, but also ensures that certain types of problems are addressed by the program.

Operation Fuel is seeking a low-income affordability program that meets the needs of all low-income Connecticut households with energy affordability problems. From that perspective, it appears to be appropriate for electric and gas affordability programs to focus on identifying households that are having problems paying their bills, whether or not they have outstanding arrears. In that way, the program can work proactively with customers to establish an affordable payment level and ensure that customers pay consistently throughout the year.

### *Benefit Type*

From the review of programs in the multi-sponsor study that there are three components of benefit design that result in the ratepayer programs with the lowest administrative cost and the highest level of effectiveness.

- **LIHEAP Integration** – Programs that are integrated with LIHEAP are able to take advantage of the intake infrastructure to minimize administrative costs, and to use information from LIHEAP and the utility to measure energy burden and target benefits.
- **Equal Monthly Payments** – Programs that ask clients to make equal monthly payments appear to have the most success in improving client payment patterns and reducing collection expenses, shutoffs, and write-offs.
- **Segmentation** – It appears that programs need to explicitly consider client demographics and preprogram payment behavior when setting benefit levels, since different population segments appear to have different needs for assistance.

If Connecticut's LIHEAP Office administered ratepayer-funded electric and gas affordability programs, they could effectively integrate LIHEAP and ratepayer-funded benefits. In New Jersey, customers apply for the LIHEAP and USF programs using one application form. The LIHEAP Office gets customer demographic information from the LIHEAP application and estimated electric and gas bills from the utility companies. If Connecticut used that system, they could estimate the customer's bill, subtract the customer's LIHEAP payment, and then assign



the customer a fixed payment that is the lesser of the customer's estimated net monthly bill and the targeted monthly percentage of income.

This procedure is an enhancement over the New Jersey system because it allows the utility to charge the customer a fixed monthly amount for electric and/or gas service. In New Jersey, the customer's benefit is translated into a fixed credit which leaves the customer at risk for higher costs due to price increases, colder weather in the winter, or warmer weather in the summer. In a Connecticut program, we would recommend that the LIHEAP office informs the utility how much to charge the customer, rather than telling the utility how much credit to give the customer.

### *Arrearage Forgiveness*

From our study, we find that programs need to develop some form of arrearage forgiveness, since customers with large preprogram arrears do not appear to have the ability to pay off those debts, even with a more affordable monthly bill. The evaluation findings appear to suggest that customers are likely to fail on the program if no arrearage forgiveness is available. Many different options have been tested; but, there is no clear evidence on which approach is most effective.

- **Program Enrollment Forgiveness** – Advocates sometimes suggest that arrearages should be forgiven at the time of program enrollment. They believe that the “clean slate” approach relieves the customer of past problems and allows the customer to focus on paying current bills. However, others are concerned that such an approach would just encourage customers to disregard future utility bills with the expectation that they would be forgiven again.
- **Monthly Noncontributory Forgiveness** – Some programs allow customers to earn preprogram forgiveness by making consistent monthly payments on current bills. The theory is that the forgiveness will encourage customers to make establish good bill payment habits. Evaluations of these programs find that many customers achieve full arrearage forgiveness. However, the evaluations also find that many customers did not actually understand the arrearage forgiveness program, raising questions as to the effectiveness of this incentive.
- **Monthly Contributory Forgiveness** - Some programs allow customers to earn preprogram forgiveness by making consistent monthly payments on current bills and a small payment on their arrears. The theory is that it is appropriate for customers to make some payment toward their back debt. Evaluations of these programs find that many customers achieve full arrearage forgiveness. However, as with the noncontributory monthly forgiveness programs, the evaluations also find that many customers did not actually understand the arrearage forgiveness program, raising questions as to the effectiveness of this incentive.

Connecticut's current program is a contributory forgiveness model that requires customers to make a fixed number of payments prior to receiving arrearage forgiveness. While it appears that a contributory forgiveness program offers customers an incentive for making payments and for avoiding future arrears, survey research evidence suggests that customers are more likely to understand a monthly forgiveness model, rather than one that requires a certain number of payments before any forgiveness credits are granted.

### *Communications*

If Operation Fuel is successful in making changes to the utility arrearage forgiveness programs, communication of those changes will be critical to the success of the new program designs. Our research found that many programs have faced challenges in communicating program requirements and opportunities to clients and that a program must develop an effective communication plan program that goes beyond simple mailings from the LIHEAP office or utilities if they wish to effectively communicate with clients.

### *Energy Efficiency Programs*

Our research demonstrates that ratepayer-funded energy efficiency programs can effectively complement ratepayer-funded affordability programs. Our national research shows that the following are best practices with respect to ratepayer energy efficiency programs.

- **Data Management and Quality Control** – Energy efficiency programs need an effective data system that tracks service delivery and a quality control procedure in which state or third party inspectors examine the work for a sample of treated homes. These procedures ensure that the program meets appropriate quality standards.
- **Targeting to Affordability Program Participants** – If a state has a low-income affordability program, they may find that it is most beneficial to ratepayers to give the highest priority for energy efficiency services to affordability program participants. Depending on the structure of the affordability program, such targeting may result in savings that accrue to other ratepayers in the short run.
- **Targeting to High Users** - Policymakers need to consider how aggressively to target high users. This decision is also made easier if there is a low-income affordability program. With such a program, energy bills can be made affordable for program participants through a subsidy. From that perspective, there is less controversy associated with targeting the highest users for energy efficiency services.
- **Level of Investment** – The program may want to determine a maximum level of investment per home. However, if it does, the maximum should be much higher for the highest usage homes. In addition, the program may also want to consider which measures deliver the greatest benefits to other ratepayers. Other things being equal, measures that help to reduce energy system peak demand are of greater value to other ratepayers than measures that do not affect peak demand.

The Connecticut ratepayer funded energy efficiency programs are funded at a level where they could make a significant impact on the energy needs of low-income households. However, an evaluation of these programs recommended that they be targeted to the lowest income, highest burden households, and that the programs make a more significant investment in each home treated.

### **Summary and Recommendations**

Our study found that a significant number of low-income households in Connecticut have a need for additional energy assistance beyond LIHEAP and WAP.

- **Energy Affordability** – To reduce energy burden to 5% of income for all low-income households in Connecticut, about \$191 million billion in energy assistance funds would be needed. To reduce energy burden to 15% of income, about \$104 million would be needed. In 2005, funding from LIHEAP and the ratepayer-funded arrearage forgiveness program was about \$51 million.
- **High Usage** – We estimate that about 30,000 low-income households in Connecticut have high electric or gas heating usage that could be effectively addressed with energy efficiency programs, and that about 44,000 households have high electric baseload usage that could be effectively addressed with energy efficiency programs. Low-income energy efficiency programs in Connecticut serve a large number of low-income households. However, the programs do not adequately target the households with the highest level of energy usage and deliver a sufficient level of services to have a significant impact on affordability for low-income households.

While the current programs deliver significant benefits to a large number of households, there are some important issues with the current programs.

- **LIHEAP Integration** – The Connecticut arrearage forgiveness programs are coordinated with LIHEAP in that they require that a household receive a LIHEAP grant in order to enroll in the program. However, they do not consider how the combined value of LIHEAP and ratepayer benefits affects the overall affordability energy bills for customers.
- **Affordable Payments** – The original design of the Connecticut arrearage forgiveness programs does not consider whether the targeted payment level is affordable to the customer. The revised design allows customers to pay less than their budget bill if they can demonstrate a need. However, under this model, unpaid balances accrue as arrears rather than be forgiven.
- **Targeting** – The structure of the arrearage forgiveness program makes it likely that the highest income households will be most likely to receive program benefits. Most ratepayer-funded programs target benefits to the lowest income, highest burden customers.
- **WAP Integration** – The Connecticut ratepayer-funded energy efficiency programs are only partially integrated with the delivery of WAP funded services. The program evaluation found that additional coordination could enhance the value of program services to low-income customers.

Operation Fuel is advocating for major changes in the ratepayer funded affordability and energy efficiency programs. We recommend that they consider the following directions for the Connecticut programs.

- **Affordability and Funding** – Using the statistics available in the memo, Operation Fuel can assess the level of funding that would be required to serve low-income households at targeted energy affordability levels. Operation Fuel should select an affordability standard that it believes will be effective in meeting the needs of low-income households and should advocate for funding levels required to serve at least 50% of households with energy needs at the defined standard.

- **Integration with Publicly Funded Programs** – Integration of ratepayer-funded programs with publicly-funded programs reduces program administration costs and increases the consistency of benefits delivered to low-income customers. Further, a centralized program database is a powerful tool to improve program operations and effectiveness. A fully integrated program would be able to apply the resources from the federal government and ratepayers in a way that best meets the needs of low-income households in Connecticut.
- **Affordability and Sustainability** – Operation Fuel should advocate for changes in the ratepayer-funded affordability and energy efficiency programs that target benefits to customers with the greatest needs and employ program parameters that have been demonstrated to be the most effective in serving low-income customers. For affordability programs, best practices include furnishing higher benefits to higher burden customers and establishing fixed payment levels on a year round basis. For energy efficiency program, best practices include targeting the highest usage households and delivering the highest level of service to those households with the greatest savings opportunities. In addition, on-going communications with customers stressing the importance of making consistent payments and informing customers of their other program responsibilities are critical to ensuring the success of the program.

Policymakers have the opportunity to significantly improve energy affordability for low-income households in Connecticut by working to improve the existing set of ratepayer-funded low-income affordability and energy-efficiency programs.

## **State Report – Connecticut**

This Appendix furnishes detailed information for Connecticut, including:

- **Statistical Overview** – Key characteristics for Connecticut households and housing units.
- **Needs Assessment** – Statistics for Connecticut low-income households and estimates of the need for energy affordability and energy efficiency programs.
- **Legal and Regulatory Framework** – A description of the legal and regulatory framework for low-income programs and identification of any legal or regulatory barriers to program design enhancements.
- **Low-Income Affordability Programs** – Information on Connecticut's publicly funded affordability programs, the ratepayer-funded affordability programs targeted by this study, and an assessment of the share of need currently being met.
- **Affordability Program Evaluation** – A summary of the available evaluation findings regarding the performance of Connecticut's affordability programs.
- **Energy Efficiency Programs** – Information on Connecticut's publicly funded energy efficiency programs and the ratepayer-funded energy efficiency programs targeted by this study.
- **Energy Efficiency Program Evaluation** – A summary of the available evaluation findings regarding the performance of Connecticut's energy efficiency programs.

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### **I. Statistical Overview**

Connecticut is the 29<sup>th</sup> largest state in terms of population. It is relatively wealthy (3<sup>rd</sup> in median family income in 2005) and has a relatively low poverty rate (49<sup>th</sup> in individuals below poverty). An important challenge for low-income households in Connecticut is the high cost of living. In 2005, the median housing value was \$271,500 and the median rent was \$839.

A little under half of the housing units (45%) in Connecticut are heated with regulated fuels, most of those with natural gas (30%). Over half of the housing units are heated with fuel oil (51%). Energy prices are relatively high, with electric 44% above the national average and gas 26% above the national average. The weather is cold in the winter (6,068 heating degree days compared to the national average of 4,524) and moderate in the summer (568 cooling degree days compared to the national average of 1,242). Households are most at risk from the cold during the months of November through April, and are most at risk from the heat during the months of July and August.

The following population and housing statistics were developed using data from the 2005 American Community Survey (ACS).

### **Population Profile**

Total Population .....	3.4 million
Individuals 65 and Over .....	0.4 million (13%)
Individuals Under 18 .....	0.8 million (25%)
Individuals 5 & Over Who Speak a Language Other than English at Home ....	0.6 million (19%)
Individuals Below Poverty .....	8.3% (49 <sup>th</sup> nationally)

### **Household Profile**

Total Households .....	1.3 million
Median Household Income .....	\$60,941 (3 <sup>rd</sup> nationally)

#### **Homeowners**

Total Homeowners .....	0.9 million (69%)
Median Value .....	\$271,500 (9 <sup>th</sup> nationally)
Median Housing Burden .....	23%

#### **Renters**

Total Renters .....	0.4 million (31%)
Median Rent .....	\$839
Median Rental Burden .....	28%

The following energy statistics were derived from a number of sources, including the 2005 American Community Survey (ACS), the Energy Information Administration's (EIA) supplier data collection, and NOAA's National Climatic Data Center (NCDC).

### **Energy Profile**

#### **Home Heating Fuel** (Source: 2005 ACS)

Utility gas .....	30%
Electricity .....	15%
Fuel Oil .....	51%
Other .....	4%

#### **2005 Energy Prices** (Source: EIA)

Natural gas, per ccf .....	\$1.624
Electricity, per kWh .....	\$0.1364
Fuel oil, per gallon .....	\$1.944

#### **Weather** (Source: NCDC)

Heating Degree Days .....	6,068
Months of Winter (i.e., average temperature below 50°) .....	6
Cooling Degree Days .....	568
Months of Summer (i.e., average temperature above 70°) .....	2
Days with Temperatures Over 90° .....	12

[Note: Updates are available for energy prices and weather for 2006. Population statistics updates for 2006 will be available in August 2007.]

## II. Profile of Low Income Households

Connecticut policymakers have chosen to target the publicly funded and ratepayer-funded low income programs at households with incomes at or below 150% of the HHS Poverty Guideline. For 2005, the income standard for a one-person household was about \$14,355 and the income standard for a four-person household was \$29,025. For the analysis of low-income households in Connecticut, we use households incomes at or below 150% of the HHS Poverty Guideline.

[Note: Connecticut targets publicly funded low-income programs to elderly (age 60+) and disabled households with incomes at or below 200% of the HHS Poverty Guideline. We have developed supplemental tables to describe those households.]

Table 1 furnishes information on the number of Connecticut households with incomes that qualify them for the LIHEAP program and the ratepayer-funded programs. About 14% of Connecticut households are income-eligible for these programs.

**Table 1**  
**Eligibility for Ratepayer Programs (2005)**

Poverty Group	Number of Households	Percent of Households
Income at or below 150%	188,138	14%
Income above 150%	1,131,413	86%
ALL HOUSEHOLDS	1,319,551	100%

Source: 2005 ACS

Tables 2A and 2B furnish information on main heating fuels and housing unit type for Connecticut low-income households. Table 2A shows that about 36% of low-income households use natural gas as their main heating fuel, somewhat more than the 30% for all Connecticut households. Low-income households are more likely to heat with electricity than the Connecticut average. Table 2B shows that one of the reasons for the higher rate of electric main heat is that 37% of low-income households are in buildings with 5 or more units. Many multiunit buildings use electric space heating rather than natural gas or fuel oil. About 35% of low-income households live in single family homes, while 27% live in buildings with 2-4 units. Very few households (1%) live in mobile homes.

**Table 2A**  
**Main Heating Fuel for Low-Income Households (2005)**

Main Heating Fuel	Number of Households	Percent of Households
Electricity	46,010	24%
Fuel Oil	67,754	36%
Other Fuels	6,821	4%
No fuel used	420	0%
Utility Gas	67,133	36%
ALL LOW INCOME	188,138	100%

Source: 2005 ACS

**Table 2B**  
**Housing Unit Type for Low-Income Households (2005)**

Housing Unit Type	Number of Households	Percent of Households
Boat, RV, Van, etc	374	0%
Mobile Home	1,165	1%
Building with 2-4 units	51,126	27%
Building with 5+	70,029	37%
Single Family	65,444	35%
ALL LOW INCOME	188,138	100%

Source: 2005 ACS

About 188,138 Connecticut households are categorized as low-income. However, only those households that directly pay an electric bill or a gas bill are eligible for the Connecticut ratepayer-funded programs. Table 2C shows that about 84% of low-income households directly pay an electric bill and that about 37% of low-income households directly pay a gas bill.

**Table 2C**  
**Low-Income Households**  
**Direct Payment for Electric and/or Gas Bill (2005)**

Poverty Group	Number of Households	Percent of Households
Electric Bill - Direct Payment	158,450	84%
Gas Bill - Direct Payment	70,127	37%
ALL INCOME ELIGIBLE	188,138	100%

Source: 2005 ACS

Tables 3A and 3B show the distribution of electric bills and burden for low-income households that do not heat with electricity and reported electric expenditures separately from gas expenditures.<sup>1</sup> Table 3A shows the distribution of electric expenditures for households that do not have electricity as their main heating fuel and Table 3B shows the electric energy burden.<sup>2</sup> Among these households, about 64% have electric bill that is less than \$1,000 per year while about 17% have an annual electric bill of \$1,500 or more. Electric energy burden is less than 5% of income for about 28% of these households, while it is 15% of income or more for 26% of households.<sup>3</sup>

<sup>1</sup>The ACS allows respondents who have a combined electric and gas bill from one utility to report the total for both fuels. Those households are not included in these tables.

<sup>2</sup> Electric energy burden is defined as the household's annual electric bill divided by the household's annual income.

<sup>3</sup> About 13% of households have their electric usage included in their rent. These households have a nonzero electric energy burden, since part of their rent is used to pay the electric bill. However, since there is no way to measure the share of rent that is used to pay the electric bill, electric energy burden is unknown for these households.



**Table 3A****Electric Bills for Low-Income Households without Electric Heat (2005)**

<b>Electric Bill</b>	<b>Number of Households</b>	<b>Percent of Households</b>
\$1 to less than \$500	33,373	27%
\$500 to less than \$1,000	46,341	37%
\$1,000 to less than \$1,500	23,466	19%
\$1,500 or more	20,942	17%
<b>TOTAL</b>	<b>124,122</b>	<b>100%</b>

Source: 2005 ACS

**Table 3B****Electric Burden for Low-Income Households without Electric Heat (2005)**

<b>Electric Burden</b>	<b>Number of Households</b>	<b>Percent of Households</b>
0% to less than 5%	34,453	28%
5% to less than 10%	41,407	33%
10% to less than 15%	16,646	14%
15% or more	31,616	25%
<b>TOTAL</b>	<b>122,600</b>	<b>100%</b>

Source: 2005 ACS

Tables 4A and 4B show the distribution of electric bills and burden for low-income households that heat with electricity. Table 4A shows the distribution of electric expenditures and Table 4B shows the electric energy burden. Among these households, about 46% have an electric bill that is less than \$1,000 per year while about 36% have an annual electric bill of \$1,500 or more. Electric energy burden is less than 5% of income for about 13% of these households, while it is 15% of income or more for 40%.

**Table 4A****Electric Bills for Low-Income Households with Electric Heat (2005)**

<b>Electric Bill</b>	<b>Number of Households</b>	<b>Percent of Households</b>
\$1 to less than \$500	6,415	19%
\$500 to less than \$1,000	9,495	28%
\$1,000 to less than \$1,500	6,288	18%
\$1,500 or more	12,130	36%
<b>TOTAL</b>	<b>34,328</b>	<b>100%</b>

Source: 2005 ACS

**Table 4B**  
**Electric Burden for Low-Income Households with Electric Heat (2005)**

<b>Electric Burden</b>	<b>Number of Households</b>	<b>Percent of Households</b>
0% to less than 5%	4,619	13%
5% to less than 10%	10,285	30%
10% to less than 15%	5,833	17%
15% or more	13,591	40%
<b>TOTAL</b>	<b>34,328</b>	<b>100%</b>

Source: 2005 ACS

Tables 5A and 5B show the distribution of gas bills and burden for low-income households that heat with gas and report their gas bills separately from their electric bills. Table 5A shows the distribution of gas expenditures and Table 5B shows the gas energy burden. Among these households, about 54% have a gas bill that is less than \$1,000 per year while about 33% have an annual gas bill of \$1,500 or more. Gas energy burden is less than 5% of income for about 27% of these households, while it is 15% of income or more for 36%.

**Table 5A**  
**Gas Bills for Low-Income Households (2005)**

<b>Gas Bill</b>	<b>Number of Households</b>	<b>Percent of Households</b>
\$1 to less than \$500	19,472	29%
\$500 to less than \$1,000	16,934	25%
\$1,000 to less than \$1,500	9,290	14%
\$1,500 or more	22,381	33%
<b>TOTAL</b>	<b>68,077</b>	<b>100%</b>

Source: 2005 ACS

**Table 5B**  
**Gas Burden for Low-Income Households (2005)**

<b>Gas Burden</b>	<b>Number of Households</b>	<b>Percent of Households</b>
0% to less than 5%	18,408	27%
5% to less than 10%	14,687	22%
10% to less than 15%	10,632	16%
15% or more	24,350	36%
<b>TOTAL</b>	<b>68,077</b>	<b>100%</b>

Source: 2005 ACS

Tables 6A and 6B show the distribution of total electric and gas expenditures for low-income households that pay bills directly to a utility company. Table 6A shows the distribution of electric and gas expenditures and Table 6B shows the electric and gas energy burden. About 85% of households have an electric bill, a gas bill, or both. About 35% of low-income households have a total electric and gas bill that is less than \$1,000 per year while 17% have an annual bill of

\$2,500 or more. Electric and gas energy burden is less than 5% of income for 13% of low-income households, while it is 25% of income or more for about 24% of households.

**Table 6A**  
**Electric and Gas Bills for Low-Income Households (2005)**

<b>Electric and Gas Bill</b>	<b>Number of Households</b>	<b>Percent of Households</b>
\$1 to less than \$500	24,806	13%
\$500 to less than \$1,000	40,543	22%
\$1,000 to less than \$1,500	27,543	15%
\$1,500 to less than \$2,000	21,137	11%
\$2,000 to less than \$2,500	12,493	7%
\$2,500 or more	32,775	17%
No Bill	28,841	15%
ALL INCOME ELIGIBLE	188,138	100%

Source: 2005 ACS

**Table 6B**  
**Electric and Gas Burden for Low-Income Households (2005)**

<b>Electric and Gas Burden</b>	<b>Number of Households</b>	<b>Percent of Households</b>
0% to less than 5%	24,581	13%
5% to less than 10%	41,449	22%
10% to less than 15%	23,988	13%
15% to less than 20%	13,909	7%
20% to less than 25%	10,581	6%
25% or more	44,789	24%
No Bill	28,841	15%
ALL INCOME ELIGIBLE	188,138	100%

Source: 2005 ACS

We have developed a series of demographic tables for households that pay an electric or gas bill. Table 7 furnishes information on the presence of vulnerable members in the household and illustrates what share of the population might be particularly susceptible to energy-related health risks. Table 8 shows the household structure for these households, and Table 9 presents statistics on the language spoken at home by these households.

Just over one-third of the low-income households with utility bills are elderly. Twenty-nine percent do not have any vulnerable household members. Some programs choose to target vulnerable households with outreach procedures and may offer priority to these households.

**Table 7**  
**Vulnerability Status for Low-Income Households with Utility Bills (2005)**

<b>Vulnerability Type</b>	<b>Number of Households</b>	<b>Percent of Households</b>
Disabled	31,397	20%
Elderly	55,719	35%
Young Child	26,642	17%
No Vulnerable Members	45,539	29%
Total	159,297	100%

Source: 2005 ACS

About one-third of low-income households have children, about one-third are headed by a person 65 or older, and about one-third are other household types. Single parent families with children represent almost one-quarter of low-income households with utility bills.

**Table 8**  
**Household Type for Low-Income Households with Utility Bills (2005)**

<b>Household Type</b>	<b>Number of Households</b>	<b>Percent of Households</b>
Married with Children	15,604	10%
Single with Children	36,670	23%
Senior Head of Household	54,889	34%
Other	52,134	33%
TOTAL	159,297	100%

Source: 2005 ACS

About 17% of low income households speak Spanish, while about 10% speak an Indo-European language (e.g., Russian, Polish). In total, program managers might find that 29% of eligible households speak a language other than English at home.

**Table 9**  
**Language Spoken at Home by Low-Income Households with Utility Bills (2005)**

<b>Language Spoken</b>	<b>Number of Households</b>	<b>Percent of Households</b>
English	112,393	71%
Spanish	27,688	17%
Indo-European	16,128	10%
Other	3,088	2%
TOTAL	159,297	100%

Source: 2005 ACS

### III. Legal and Regulatory Framework

Connecticut has a long history of providing regulatory assistance to low-income customer who cannot afford to pay their home energy bills. For example:

- Connecticut's investor-owned utilities may not refuse service to low-income customers due to the inability to pay a cash security deposit as a condition for providing service;<sup>4</sup>
- Gas and electric service disconnections for nonpayment may not occur if a lack of utility service would create a life-threatening situation and the customer lacks the resources to pay the entire account;<sup>5</sup>
- Gas heating and electric utilities may not terminate service for nonpayment to "hardship" customers<sup>6</sup> between November 1 and April 15;<sup>7</sup>
- Electric companies must reinstate service to hardship customers without requiring any payment between November 1 and April 15,<sup>8</sup> while gas companies must reinstate service with certain limitations.<sup>9</sup>

Each of the protections identified above is means-tested.

#### A. Rate Affordability Assistance

The primary utility-funded low-income rate assistance program in Connecticut is the "arrearage forgiveness" program operated by each regulated gas and electric utility.

Connecticut General Statute §16-262c provides that a residential customer using electricity or gas for heat may be eligible to have monies due and owing deducted from the customer's delinquent account provided the customer meet certain criteria. That customer must:

- a. Apply for and be eligible for benefits available under the Connecticut Energy Assistance Program (CEAP). . .<sup>10</sup>

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<sup>4</sup> Conn. Gen. Stat. §16-262j(a) ("No public service company and no electric supplier shall refuse to provide electric, gas or water service to a residential customer based on the financial inability of such customer to pay a security deposit for such service").

<sup>5</sup> CGS §16-262c(b)(1)]

<sup>6</sup> Conn. Gen. Stat. §16-262c(b)(3)(B) (2007). ("hardship case" includes, but is not limited to: (i) A customer receiving local, state or federal public assistance; (ii) a customer whose sole source of financial support is Social Security, Veterans' Administration or unemployment compensation benefits; (iii) a customer who is head of the household and is unemployed, and the household income is less than three hundred per cent of the poverty level determined by the federal government; (iv) a customer who is seriously ill or who has a household member who is seriously ill; (v) a customer whose income falls below one hundred twenty-five per cent of the poverty level determined by the federal government; and (vi) a customer whose circumstances threaten a deprivation of food and the necessities of life for himself or dependent children if payment of a delinquent bill is required"). See also, Conn. Admin. Code, §16-3-100 (2007). Functionally the companies treat as hardship anyone who qualifies for energy assistance. Most years this is limited to households with income up to 200% of the Federal Poverty Level, but the companies tend to treat households with income up to 60% of State Median Income as eligible for moratorium protection in those periods when the state provides energy assistance to such households..

<sup>7</sup> Conn. Gen. Stat. §16-262c(b)(1) (2007). Effective October 1, 2007, this date becomes May 1. Public Act 07-242, §67.

<sup>8</sup> Effective October 1, 2007, this date becomes May 1. Public Act 07-242, §67.

<sup>9</sup> Conn. Gen. Stat. §16-262c(b)(1). See generally, Joint Investigation of the Department of Public Utility Control and the Department of Income Maintenance into the Procedures and Practices of the Connecticut Light and Power Company in Reinstating Electric and Gas Service, Docket No. 86-II-04, Decision, April 19, 1988.

- b. . . .
- c. Enter into and comply with an amortization agreement, which agreement is consistent with the decisions and policies of the Department.<sup>11</sup>

Connecticut General Statute §16-262c provides that such an amortization agreement will result in a reduction of a customer's payments by the amount of the benefits reasonably anticipated from energy assistance.

Mandated by statute to offer such programs,<sup>12</sup> the arrearage forgiveness programs are divided into separate winter and summer components:<sup>13</sup>

- The winter component provides that if a customer receives benefits through the energy assistance program, enters into a payment agreement for his or her arrears, and makes all required payments pursuant to that payment agreement by April 30, the utility will match the amount the customer paid (including the amount of energy assistance) with a bill credit of equal amount.
- The summer program provides that if a customer has participated in the winter program (and successfully completed his or her winter payments), and if the customer makes all summer payments by October 30, the utility will providing a matching credit of equal amount.

Matching bill payments can reduce a preprogram arrears to \$0 but cannot result in a credit on the customer's account.

#### *The Basic Natural Gas Utility Hardship Customer Arrearage Forgiveness Plan*

The arrearage amortization plans offered by the three Connecticut natural gas utilities (Connecticut Natural Gas, Yankee Gas Services, Southern Connecticut Gas) followed a fundamentally similar design.<sup>14</sup> Under these plans:

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<sup>10</sup> In some instances, as described in more detail below, a customer may receive protections if he or she received assistance through a non-state source of energy assistance, e.g., a fuel bank for heat.

<sup>11</sup> Application of the Connecticut Light and Power Company, the United Illuminating Company, the Connecticut Natural Gas Corporation, the Southern Connecticut Gas Company, and the Yankee Gas Services Company, for Approval of the Arrearage Forgiveness Program for 2006 – 2007, Docket No. 06-03-01, Decision, September 27, 2006.

<sup>12</sup> Electric non-heating programs are voluntary. Mandatory programs are directed only toward "a residential customer of a gas or electric distribution company using gas or electricity for heat." Connecticut General Statute, §16-262c(4).

<sup>13</sup> Connecticut's natural gas utilities are mandated to file annual "implementation plans" on or before July 1 of each year. Connecticut Gen. Stat. §16-262c(b)(5). The state Department of Public Utility Control (DPUC), in consultation with the Office of Policy and Management, shall, after hearing, approve or modify such plans within ninety days of receipt.

<sup>14</sup> Indeed, while each gas utility filed a separate plan in the early years following enactment of the legislation, by 2002, the three utilities (Connecticut Natural Gas Corporation, Southern Connecticut Gas Company, Yankee Gas Services) had sufficiently uniform plans that the companies filed a "Joint Plan Submission." Joint Application of Connecticut Natural Gas Corporation, the Southern Connecticut Gas Company, and Yankee Gas Services for Approval of Arrearage Forgiveness Program for 2002 – 2003, Docket No. 02-07-01, Decision (September 26, 2002). See also, Joint Application of the Connecticut Natural Gas Corporation, the Southern Connecticut Gas Company, and Yankee Gas Service Company for Approval of the Arrearage Forgiveness Program for 2003 – 2004, Docket No. 03-07-03, Decision, September 17, 2003 ("In the future, the Companies will submit a joint plan to ensure that the Plan's policies, procedures and practices are identical for each company"). Joint Application of Connecticut Natural Gas Corporation, the Southern Connecticut Gas Company, and Yankee Gas Services Company for Approval of Arrearage Forgiveness Program 2004 – 2005, Docket No. 04-07-01, Decision, September 15, 2004 ("The Companies submitted a joint Plan that is identical in its policies, procedures and practices for each company").

- A customer was required to make a monthly payment equal to 1/12<sup>th</sup> of the annual gas consumption minus the anticipated energy assistance benefit, plus an affordable payment amount toward the arrearage.
- Existing customers who applied prior to or during November – a hardship customer must apply to become a part of the program — would be required to make a total of six personal payments between November 1 and April 30; the customer would be required to make an additional six payments between May 1 and October 31.
- Customers who entered the Plan after November would be required to make a number of payments equal to the number of months remaining in the applicable six-month period.
- After each six month period of the Plan, the company would credit the customer account of each Plan participant who has successfully complied with their budget arrangement an appropriate amount reflecting their own customer payments and any energy assistance benefits paid or committed on their behalf.
- Customers who enroll in the program, and who also qualify for company-sponsored efficiency investments, will be provided free conservation services.<sup>15</sup>

The similarity in plans was an issue of equity, the DPUC said. As early as 1993, the DPUC found that “representatives of the Companies and Department staff compared the Companies’ respective plans and found that for a given customer the plans resulted in monthly payments that were significantly different.”<sup>16</sup> In disapproving that approach, the DPUC said:

The Department is concerned that the relative ease or difficulty of a customer’s participation in an arrearage forgiveness plan should not depend on the customer’s address. For reasons of equity, a customer’s monthly payment amount should depend on the amount of the arrearage and the fuel assistance benefit, not on whether he or she happens to live in Hartford, Meriden or Bridgeport. We conclude that there should be uniformity in the formulas used by the Companies in determining a customer’s monthly payment amount, and, by extension, the formulas used in calculating the forgiveness applied to a customer’s arrearage.<sup>17</sup>

### *Specific Legal Doctrine*

Given Connecticut’s statutory reliance on the successful completion of designated deferred payment plans as the trigger for the receipt of matching payments, the state regulatory commission (DPUC) devoted substantial attention to defining the parameters of payment plan compliance. Compliance with the winter payment terms received the greatest attention.

<sup>15</sup> See, e.g., Application of Yankee Gas Services Company for Approval of an Implementation Plan for Hardship Customers Arrearage Amortization Policy Pursuant to Public Act 91-150, Docket No. 91-07-01 (Part B), Corrected Decision, September 25, 1991; Application of The Connecticut Natural Gas Company for Approval of an Implementation Plan for Hardship Customers Arrearage Amortization Policy Pursuant to Public Act 91-150, Decision, September 25, 1991.

<sup>16</sup> Applications of the Connecticut Natural Gas Company, the Southern Connecticut Gas Company, and the Yankee Gas Services Company for Approval of Implementation Plans for Hardship Customers Arrearage Amortization Policy Pursuant to Public Act 91-150, Decision, Docket Nos. 93-06-20, 93-06-21, 93-07-03 (consolidated), Decision, September 29, 1993.

<sup>17</sup> 1993 Consolidated Applications Decision, at 6.

## Retroactive Payments

If a customer enrolls in a payment plan subsequent to November, that customer may not be required to make payments retroactive to November 1.<sup>18</sup> In disapproving the Southern Connecticut Gas proposal to require hardship customers to make six winter payments prior to April 30 as a prerequisite to obtaining a matching grant, irrespective of when such customers entered the program, the DPUC held that any retroactive payments made by customers is to be accomplished on a strictly voluntary basis. If a customer voluntarily makes such payments, he or she may earn the matching credit for them. The payment plan that must be successfully completed to earn matching credits at all, however, may not include a requirement that retroactive payments be made. In rejecting a renewed request by Southern Connecticut Gas to impose a retroactive payment requirement in 1992, the DPUC explained:

This Act was passed in an attempt to assist both hardship customers and the Companies by providing payment incentives. The Act encourages indebted customers who have found themselves in a vicious cycle of service termination and reconnection to make affordable monthly payments and receive not only the benefit of continued year-round service but al the benefit of a reduced arrearage.

Additional burdens on these customers may well discourage them from trying to reduce their arrearages at all. The Act is intended to reduce the levels of arrearages. By proposing mandatory retroactive payments, the Company is seeking to raise the monthly payment amount for some customers at a time when energy assistance may be reduced. The energy assistance reductions are enough of a deterrent without making participating in this program more difficult.

SCG apparently believes that participants who were eligible from November 1 should be penalized with retroactive payments if they are not signed up by November 1 on the grounds that if late signers are not charged retroactively, it is unfair to the customers that did start from November 1. The Authority rejects this argument. Customers already have an incentive to sign up for the program early because customers who participate for a shorter period of time receive reduced benefits. . .<sup>19</sup>

The DPUC found further that Southern Connecticut Gas “is not precluded from encouraging customers who sign up after November 1 and who were eligible at that time from making voluntary retroactive payments, thereby increasing the benefit of the program to them.” Ultimately, however, the DPUC approved a proposal requiring “existing eligible customer who may sign up for the Program in March or April. . .to make a minimum of the equivalent of three monthly payments by April 30.”<sup>20</sup>

## Committed Fuel Assistance Funds

The DPUC approved a proposal to include all energy assistance benefits committed to a customer deducted from their arrearage, along with a matching payment based on that commitment, irrespective of whether the energy assistance benefits have actually been paid.

<sup>18</sup> Application of Southern Connecticut Gas Company for Approval of Implementation Plan for Hardship Customers Arrearage Amortization policy Pursuant to Public Act 91-50, Reopened Proceeding, Decision, February 26, 1992.

<sup>19</sup> Applications of the Yankee Gas Services Company, The Connecticut Natural Gas Company, and The Southern Connecticut Gas Company for Approval of Implementation Plans for Hardship Customers Arrearage Amortization Policy Pursuant to Public Act 91-150, Dockets Nos. 92-07-15, 92-07-24 and 92-07-25 (consolidated), Decision, September 28, 1992).

<sup>20</sup> Joint Application of Connecticut Natural Gas Corporation, the Southern Connecticut Gas Company, and Yankee Gas Services Company for Approval of Arrearage Forgiveness Program 2005 – 2006, Docket No. 05-07-01, Decision, September 14, 2005.



The DPUC agreed with the state agency, the Department of Social Services, administering the federal energy assistance money, LIHEAP office's representation that "the commitment is a guarantee of payment when the Federal funds become available."<sup>21</sup>

This decision is necessary, DPUC said, in order to protect the customer regarding actions over which he or she has no control. According to the DPUC, the proposed policy of Connecticut Light and Power Company (CL&P) "of only matching payments or CEAP commitments in the Phase in which they are received penalizes the customer who has no control over when their CEAP application is processed and is contrary to the intent of the Program."<sup>22</sup> Moreover, this decision addressed problems caused by the high mobility that exists in the low-income population. A low-income customer may have done everything he or she was supposed to do, but moved during the summer. In those instances, DSS paid the customer benefit in the fall, but the customer never got that benefit matched.

### Payment Plans and Income

One of the most critical aspects of the Connecticut arrearage forgiveness program involves the efforts to ensure that the payment plan payments for pre-existing arrears are offered at affordable levels. In order for a customer to receive any matching grants, in other words, the customer must make his or her budget billing payment for current usage plus an "affordable" payment toward his or her arrears. According to the DPUC, it is the responsibility of each utility to ensure that payment plan calculations take customer-specific circumstances into account.

The Department inquired as to why the Companies do not include a customer's income in calculating a payment arrangement in their Arrearage Forgiveness Programs. The company replied that the customer's income is not taken into consideration because in the past some customers have objected to supplying that information to the Companies. The monthly payment amount is determined according to the calculations provided to the Companies. However, if it is determined that the customer is not able to pay the calculated amount, the Company may adjust the amount to the level that is within the customer's ability to pay and in compliance with Regulations of Connecticut State Agencies, §16-3-100(3)A.<sup>23</sup> The Department looks to the Companies to take into consideration a customer's income when that customer indicates an arrangement may be inappropriate for their income.<sup>24</sup>

The DPUC established a range of arrearage payments permitted under the statute, with a minimum payment of \$1 per month and a maximum monthly arrearage payment of \$50.<sup>25</sup>

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<sup>21</sup> Id., at 5, 7.

<sup>22</sup> 2006 Joint Program Approval, at 5.

<sup>23</sup> Section 16-3-100(3)A reads in relevant part: "no utility company shall: (A) terminate service to any gas or electric residential customer whose service is subject to termination for a delinquent amount until the company first offers the customer an opportunity to enter into a reasonable amortization agreement. The specifics of the reasonable amortization agreement may vary according to the particular case and shall be determined by both utility company and customer receiving residential utility service. Such agreement shall be subject to change upon the showing by the customer of a change in financial circumstances. . ."

<sup>24</sup> Joint Application of Connecticut Natural Gas Corporation, The Southern Connecticut Gas Company, and Yankee Gas Services for Approval of Arrearage Forgiveness Program for 2002 – 2003, Docket No. 02-07-01, Decision, September 26, 2002.

<sup>25</sup> Joint Application of Connecticut Natural Gas Corporation, the Southern Connecticut Natural Gas Company, and Yankee Gas Services Company for Approval of Arrearage Forgiveness Program 2005 – 2006, Docket No. 05-07-01, Decision, September 14, 2005. See also, Joint Application of Connecticut Light and Power Company and the United Illuminating Company for Approval of Arrearage Forgiveness Program 2005 – 2006, Docket No. 05-07-05, Decision, October 5, 2005 ("The Department will order the electric Companies to adjust the amount that may be requested toward the delinquent balance to \$1.00 to \$50.00 so that the policy followed by both the Gas Companies and the Electric Companies are similar").

Despite the attention to income in the calculation of the arrearage payment plan, the DPUC has held that a customer must pay his or her entire budget billing amount. The company arrearage forgiveness plans calculate a monthly payment "which can be derived by taking the prior actual twelve months for gas service, minus the estimated future energy assistance payments, divided by twelve months, plus a payment towards the arrearage."<sup>26</sup> It is the payment toward the arrearage, not the overall amortization agreement, that is to be based on "the monthly income of the customer after other indicated expenses have been deducted." The statute creating the arrearage forgiveness programs, the DPUC found, requires that an amortization agreement must include an "affordable increment" to be paid toward arrears. That "affordable increment" may not be waived. Benefits under the program should not be extended "beyond their intended scope."<sup>27</sup>

Beginning in the winter of 2007, the Department authorized operation of a payment program that may be below actual cost of service in the arrearage forgiveness program.<sup>28</sup> Social service agencies contract with the utilities to calculate the amount a household can afford under a fixed budgeting system.<sup>29</sup> If the customer complies with the agreement during the winter, the reduced payment can continue during the summer without risk of loss of service. This program allows households to earn forgiveness on an ongoing basis when heating costs exceed the ability of the household to meet this expense.<sup>30</sup> These below-budget payment agreements are not available to all hardship customers, but rather only to customers who are served by designated social service agencies that contract with the utilities to calculate the amount a household can afford to pay.<sup>31</sup>

#### Change in Financial Circumstances

The DPUC decided that customers could amend the terms of their underlying payment arrangement with a gas utility should their customer experience a "change in their financial situation."<sup>32</sup> In addition, the DPUC agreed that "when a customer misses a payment, he/she be advised that a missed payment must be made up in order to maintain eligibility [for matching grants], unless the customer can demonstrate that the change in financial circumstances caused the default, in which case the payment may be reduced."<sup>33</sup>

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<sup>26</sup> Application of the Southern Connecticut Gas Company for Approval of an Implementation Plan for Hardship Customers Arrearage Amortization Policy Pursuant to Public Act 91-150, Docket No 91-06-09 (Part A), Decision, September 10, 1991.

<sup>27</sup> *Id.*, citing Office of Consumer Counsel brief. The DPUC held that the amortization agreement, itself, is to be structured in the same way it would be under existing law and Department policy. *Id.*, citing, *Rotko v. Southern Connecticut Gas Company*, Docket No. 83-05-28, Decision, February 19, 1985; *Rogers v. Southern Connecticut Gas Company*, Docket No. 83-07-18, Decision, February 19, 1985. The only change the statute made, according to the DPUC, was to provide for the matching credits once customer payments on such an agreement had been made. *Id.*

<sup>28</sup> See, Correspondence, Louise Rickard, Acting Executive Secretary, Connecticut Department of Public Utility Control to Stephen Gibelli, Senior Counsel, NUSCO as agent for Connecticut Light and Power Company and Yankee Gas Company, Joint Application of the Connecticut Light and Power Company, the United Illuminating Company, the Connecticut Natural Gas Corporation, the Southern Connecticut Gas Company and Yankee Gas Services Company for Approval of Arrearage Forgiveness Program Year 2006 – 2007, Docket No. 06-03-11, December 11, 2006.

<sup>29</sup> According to the DPUC's December 11, 2006 approval letter, "the Income/Expense Sheet will require specific information from customers to determine what they can afford to pay. Using the approved Income/Expense Sheet, the dollar figure that results after reducing the customer's monthly income by their monthly expenses shall serve as the maximum monthly payment. . . that the company can require of a hardship customer under a payment arrangement plan."

<sup>30</sup> The utility program plan for the 2007 – 2008 program year is expected to continue this policy. Docket 07-05-21. A decision in this docket had not yet been rendered as of the date of this writing.

<sup>31</sup> Low-income advocates have advocated for the 2007 – 2008 program year that the availability of such assistance should not be dependent on an individual knowing to ask for a referral to a social service agency that is authorized to set a below-budget payment, or happen to be visiting one.

<sup>32</sup> 1991 Yankee Gas Services Plan Approval, at 7.

<sup>33</sup> *Id.*, at 5.

The DPUC rejected a company proposal that any amendment to a payment plan be limited to circumstances constituting an "emergency." The DPUC reasoned:

The Authority believes the language as presently written would send a message to the customer that they may only amend the agreement, or indeed contact the Company, if there is an "emergency." Different people may interpret the word emergency differently. The participants, especially the ones in danger of losing status in the plan, should be encouraged to engage in open discourse with the Company on issues of their financial situations. The Company will be ordered below to amend the language of its reminder letter to state if customers have experienced a change in their financial circumstances they should notify the Company, and that said change might alter the terms of their payment arrangement thereby avoiding a default.<sup>34</sup>

### Cures of Missed Payments

At the request of the Connecticut Natural Gas Company, the DPUC clarified that customers have the right to cure any missed payments during the winter period so long as those payments are made before April 31. Rather than requiring "a total of" six payments between November and the end of April, in other words, the Connecticut programs require only "the equivalent of" six payments. As Connecticut Natural Gas noted, "the amended language would more effectively encompass customers who miss a payment and make it up."<sup>35</sup>

In 2003, the DPUC changed its policy regarding missed summer payments. Historically, the utilities had required summer payments to be made by the due date in order to generate matching payments. According to the DPUC, however: "This practice has been accepted by the Department in the past; however, the Department believes that, regardless of whether it occurs during Phase One<sup>36</sup> or Phase Two,<sup>37</sup> applicants who fall behind in payments should be subject to the same requirements. This change should result in an increase in the amount of Matching Payment Program benefit that flow to the participants and at the same time reduces the number of terminations during the non-moratorium season."<sup>38</sup>

Despite this requirement for the natural gas companies, the DPUC approved a *different* cure policy for summer electric payments. Under the electric company policies, a customer who has been disconnected will be subject to normal reconnection requirements and will no longer qualify for the summer matching credits; such a customer may re-enroll in the next year. The electric policy applies only to disconnected accounts, however. "If an electric customer makes up a late payment prior to being terminated, CL&P and [United Illuminating] shall allow that customer to stay on Phase II and be eligible for a matching payment."<sup>39</sup>

The difference between the treatment of disconnected natural gas and electric customers was predicated on the particular concerns of natural gas companies over their ability to keep customers on their respective systems during warm weather months.

The gas companies believe that many hardship gas customers who heat with gas choose to go without gas service in the summer months and maintain their electric service which is more of a necessity. The gas distribution companies

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<sup>34</sup> Application of the Connecticut Natural Gas Company for Approval of an Implementation Plan for Hardship Customers Arrearage Amortization Policy Pursuant to Public Act 91-150, Docket 91-07-03, Decision, September 25, 1991.

<sup>35</sup> 1991 Connecticut Natural Gas Company Plan Approval, at 7.

<sup>36</sup> Phase One is the winter program component.

<sup>37</sup> Phase Two is the summer program component.

<sup>38</sup> 2003 Joint Application Decision, Docket No. 03-07-03, Decision, September 17, 2003.

<sup>39</sup> 2006 Joint Application Decision, at 6.

believe that their catch-up policy is appropriate because it provides gas heating customers with an additional incentive needed to continue payments and service throughout the summer.<sup>40</sup>

The Department approved both approaches, with the distinction involving the electric utility treatment of disconnected customers.

### Energy Assistance Payments

At the request of Yankee Gas Services, the DPUC approved a proposal to expand the definition of "energy assistance" payments beyond the basic LIHEAP grants that hardship customers receive. According to the Yankee Gas 1995/1996 plan, the company would "accept energy assistance payments from traditional sources such as Community Action Agencies and Operation Fuel<sup>41</sup> as well as non-traditional sources such as the Salvation Army, Red Cross, churches and religious and civic organizations."<sup>42</sup>

The DPUC rejected, however, a company proposal that would require both traditional and non-traditional sources of energy assistance payments to be equal to or greater than the minimum CEAP award. According to the DPUC:

Eligible customers who apply too late for CEAP funds or after funds have run out often find themselves in a position where they must rely on a number of traditional and non-traditional sources for assistance. Traditional and non-traditional sources often operate with limited funding which limits the amount of assistance they can provide. Requiring these payments to be equal to or greater than the CEAP award would reduce the effectiveness of the Program and limit the number of eligible customers who receive benefits from the Program. It would also unfairly punish customers who are unable to get CEAP benefits that they qualify for but are unable to participate because funds are no longer available. The Department considers non-traditional and traditional programs to be an extension of CEAP, and therefore orders the Companies to accept without limitations traditional and non-traditional sources when CEAP funding is no longer available.<sup>43</sup>

The Department said, however, that its requirements in this regard were not intended to permit "alternative funding sources whether or not CEAP payments are available. . ."<sup>44</sup> Moreover, the DPUC decided that income verification would need to be provided to the company when customers receive energy assistance from non-traditional agencies.<sup>45</sup>

### *The Basic Electric Utility Hardship Customer Arrearage Forgiveness Plan*

In 2003, Connecticut amended its statutory basis for an arrearage forgiveness program to provide for the participation of electric companies in offering such programs.<sup>46</sup> The statutory amendment provided that a residential customer using electricity for heat<sup>47</sup> may be eligible to

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<sup>40</sup> 2006 Joint Application Decision, at 6.

<sup>41</sup> Operation Fuel is Connecticut's statewide fuel fund.

<sup>42</sup> Application of Connecticut Natural Gas Corporation, Southern Connecticut Gas Company and Yankee Gas Services Company for Approval of the Winter Protected Customer Arrearage Forgiveness Policy, Docket No. 95-06-32, Decision, September 29, 1995.

<sup>43</sup> 2006 Joint Application Program Approval, at 3.

<sup>44</sup> Id.

<sup>45</sup> 2005 Joint Application Decision, at 1.

<sup>46</sup> Conn. Gen. Stat. §§16-262c(b)(4) and (5) as amended by Public Act 03-47.

<sup>47</sup> Under the statute, electric companies may, but are not required to, promulgate an arrearage forgiveness program for electric non-heating customers. The same is true for gas utilities, which are allowed, but not required, to extend their arrearage forgiveness programs to non-heating gas customers.

have monies due and owing deducted from the customer's delinquent account provided the customer meets prescribed criteria. The prescribed criteria mirror those criteria underlying the natural gas arrearage forgiveness programs.<sup>48</sup>

In approving the electric company implementation plans, the DPUC held that upon a review of the legislative history of the electric legislation, "the anticipation was that the electric amortization programs would mirror and achieve parity with the existing gas utility programs."<sup>49</sup> According to the DPUC, its "examination and analysis of the Companies Programs in this proceeding are intended to make the Programs as homogenous as possible so that each ratepayer in Connecticut is subject to the same policies and guidelines."<sup>50</sup> The annual filing to be submitted by the electric companies, the DPUC ordered, was to include "a joint plan annually to insure that the Program's policies, procedures and practices are as analogous as possible for each company."<sup>51</sup>

The only statutory difference between the natural gas and electric company programs is that while the expenditures of the natural gas companies are to be booked to a deferred account<sup>52</sup> and recovered in each company's next rate proceeding,<sup>53</sup> the statute created a System Benefits Charge (SBC) through which to recover electric program costs. "The Department agrees with the Companies that the matching payment costs as well as the costs to administer the Program such as the cost of advertising and additional staffing that are not presently included in Operations and Maintenance expense in rates should be recovered through the SBC."<sup>54</sup> Cost recovery is reviewed in the annual reconciliation of the electric company SBC collections and expenditures.

### ***B. The Integration of Energy Efficiency and Arrearage Forgiveness Assistance***

While not mandated by statute or regulation, Connecticut's natural gas utilities offered participants in their respective arrearage forgiveness programs energy efficiency services from the inception of their programs.<sup>55</sup> Southern Connecticut Gas, for example, reported to the DPUC that its list of arrearage forgiveness program participants would be "used by its Conservation Department to provide likely candidates for its CPRU [Conservation Program to Reduce Uncollectibles]. . ."<sup>56</sup> The integration of the arrearage forgiveness and low-income efficiency programs was not extensive in these early years.

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<sup>48</sup> Joint Application of the Connecticut Light and Power Company and the United Illuminating Company for Approval of an Arrearage Forgiveness Program for 2004 – 2005, Docket No. 04-04-15, Decision, August 18, 2004.

<sup>49</sup> 2004 Electric Joint Application Decision, at 5.

<sup>50</sup> *Id.*, at 7.

<sup>51</sup> *Id.*

<sup>52</sup> See e.g., Application of the Southern Connecticut Gas Company for Approval of an Implementation Plan for Hardship Customers Arrearage Amortization Policy Pursuant to Public Act 91-150, Docket No. 91-06-09 (Part A), Decision, September 10, 1991. ("The recovery of the amounts to be forgiven will be determined in future rate proceedings. . . The Accounts Receivable arrearages to be forgiven shall be deferred and recorded in Account No. 186. The Company shall maintain sufficient records on these deferred amounts and shall submit said data with its next general rate application.") Accord, Application of the Connecticut Natural Gas Company for Approval of an Implementation Plan for Hardship Customers Arrearage Amortization Policy Pursuant to Public Act 91-150, Docket No. 91-07-03, Decision, September 25, 1991.

<sup>53</sup> See, e.g., Application of the Yankee Gas Services Company for Approval of an Implementation Plan for Hardship Customers Arrearage Amortization Policy Pursuant to Public Act 91-150, Docket No. 91-07-01 (Part B), September 25, 1991. ("The Public Act provide that the Department shall allow the amounts deducted from the customer's account pursuant to the implementation plan to be recovered by the company in its rates as an operating expense.")

<sup>54</sup> 2004 Electric Joint Application Decision, at 6.

<sup>55</sup> 1991 Yankee Gas Plan Approval ("Customers who sign up for this Plan and who also qualify for the Company's "Attic Insulation Plan" will be given free conservation services.")

<sup>56</sup> Application of Connecticut Natural Gas Corporation, Southern Connecticut Gas Company and Yankee Gas Services Company for Approval of the Winter Protected Customer Arrearage Forgiveness Policy, Docket No. 95-06-32, Decision, September 29, 1995.

That changed in 2003. In the joint plan they filed, the DPUC noted, "the Companies briefly discussed their weatherization programs but did not provide any details about that program."<sup>57</sup> The DPUC wanted more:

The Department would like the Companies to continue their efforts in addressing the problem involving the significant impact energy costs have on low-income households, by targeting those customers for conservation and weatherization programs. The Department will require the Companies to file a report describing in detail the conservation and weatherization programs they offer low-income customers, along with copies of any written materials that are used to educate and inform customers about those services.<sup>58</sup>

The report was to include "a description of the benefits that customers can expect to derive from the programs, the number of applicants who participated in the conservation or weatherization programs and the number of applicants eligible for the conservation or weatherization program." This order came despite the Department's finding that "all of the Companies list weatherization as something they offer as a benefit to all Applicants."<sup>59</sup> The DPUC noted with respect to the natural gas utilities that "the Companies reported that they continue to offer conservation programs. The Conservation services include energy audits, blower door testing, weatherization, and insulation work."<sup>60</sup>

When the Connecticut electric utilities began their arrearage forgiveness programs, the DPUC noted that these companies, too, extended efficiency services to program participants. "The Companies provide conservation services within the authorized funding levels to all eligible customers who sign up for the Forgiveness Plan. The Companies work with the local community action agencies in assisting them in identifying customers and landlords who may be eligible."<sup>61</sup> The DPUC noted that "participants in the Plan will be eligible for all conservation and weatherization programs offered by the Companies."<sup>62</sup>

While utility conservation programs may be "offered" to all participants in the respective arrearage forgiveness program, the Department expressed concern about the extent to which arrearage forgiveness program participants were also participating in the conservation programs. In its most recent approval of the utility arrearage forgiveness programs, DPUC said that it "directs the gas distribution utilities. . .to establish a goal to increase participation by Arrearage Forgiveness Program customers in low-income conservation programs."<sup>63</sup>

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<sup>57</sup> Joint Application of the Connecticut Natural Gas Corporation, the Southern Connecticut Gas Company, and Yankee Gas Service Company for Approval of the Arrearage Forgiveness Program for 2003 – 2004, Docket No. 03-07-03, Decision, September 17, 2003.

<sup>58</sup> Id.

<sup>59</sup> Id.

<sup>60</sup> Joint Application of the Connecticut Natural Gas Corporation, the Southern Connecticut Gas Company, and Yankee Gas Services Company for Approval of Arrearage Forgiveness Program 2005 – 2006, Docket No. 05-07-01, Decision, September 14, 2005. In this 2005 Plan Decision, too, the DPUC explicitly noted that "all of the Companies list weatherization as being offered to benefit all applicants." Id.

<sup>61</sup> Joint Application of the Connecticut Light and Power Company and the United Illuminating Company for Approval of an Arrearage Forgiveness Program for 2004 – 2005, Docket No. 04-04-15, Decision, August 18, 2004.

<sup>62</sup> Id.

<sup>63</sup> Application of the Connecticut Light and Power Company, the United Illuminating Company, the Connecticut Natural Gas Corporation, the Southern Connecticut Gas Company, and the Yankee Gas Services Company for Approval of the Arrearage Forgiveness Program for 2006 – 2007, Docket No. 06-03-11, Decision, September 27, 2006. The Department directed the gas companies to file, on or before July 1, 2007, "a report showing the participation in the low-income conservation programs by the Arrearage Forgiveness Program customers for the year 2005 versus 2006." Id. That report is not available as of the time of this writing.

### **C. Conclusion and Summary**

Connecticut does not offer a broad-based energy affordability program. Each regulated natural gas and electric utility offers a statutorily-mandated arrearage forgiveness program directed toward hardship customers. These programs provide matching grants equal to the sum of customer payments and energy assistance directed to the customer's bill. The forgiveness programs are divided into a summer and winter program component. In order to receive any matching grant, a program participant must make all required payments during the program period. The Connecticut utility commission has observed that the forgiveness program did not change pre-existing policies regarding the structure and affordability of payment plans. Instead, the program simply provided for the matching grant aspect of the program. Both natural gas and electric utilities are ensured of cost recovery for whatever matching grant is provided, though the cost recovery comes from two separate streams of revenue.

There is no formal integration of the energy efficiency and arrearage forgiveness programs offered by the Connecticut utilities. While the Connecticut utilities report that any participant in the arrearage forgiveness program is also eligible to receive energy efficiency services, the DPUC has expressed concern over the lack of participation by customers receiving arrearage forgiveness in the respective utility efficiency programs. In its most recent approval of the arrearage forgiveness program, the DPUC directed the state's natural gas utilities to establish a goal of increasing the participation of arrearage forgiveness recipients in the conservation and weatherization programs of the respective companies.

### **IV. Low-Income Affordability Programs**

The two major affordability programs available to low-income households in Connecticut are the LIHEAP Program and the Connecticut Low-Income Assistance Program (LIAP).

- LIHEAP Program – In 2005, the Connecticut LIHEAP program received about \$46.8 million in funding from the Federal government.<sup>64</sup> Since about 60% of low-income households use natural gas or electricity for their home heating fuel, we will estimate that about \$28.1 million was made available to gas and electric customers for LIHEAP benefits.
- Utility Arrearage Forgiveness Programs – In 2005, utility arrearage forgiveness programs furnished about \$14 million in electric and gas benefits to eligible households.<sup>65</sup>

In total, about \$42.1 million was available to help pay the electric and gas bills for low-income households. Using the ACS data, we estimated the following statistics regarding the aggregate electric and gas bills for low-income households in Connecticut.

- Aggregate Electric and Gas Bill – The total electric and gas bill paid directly by low-income households is estimated to be about \$262 million. The available funding of \$42.1 million in benefits would cover about 16% of the total bill for low-income households.
- 5% Need Standard – Some analysts suggest that 5% of income is an affordable amount for low-income households to pay for the energy needs. The aggregate value of electric and gas bills that exceeds 5% of income is estimated to be about \$192 million. The available funding of \$42.1 million in benefits could cover about 22% of the unaffordable amount for low-income households. [Note: If benefits from either of these two programs

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<sup>64</sup> Source: LIHEAP Clearinghouse

<sup>65</sup> Source: LIHEAP Clearinghouse

are allocated to households with an energy burden less than 5% of income, the program would not cover 22% of the estimated need.]

- **15% Need Standard** – Some analysts suggest that 15% of income is an affordable amount for low-income households to pay for the energy needs. The aggregate value of electric and gas bills that exceeds 15% of income is estimated to be about \$104 million. The available funding of \$42.1 million in benefits could cover about 40% of the unaffordable amount for low-income households if it were targeted to only those households with energy bills greater than 15% of income.
- **25% Need Standard** – Many low-income households pay more than 25% of income for energy service. Among the ratepayer-funded low-income programs that have used a percent-of-income guideline in their benefit determination process, none have been as high as 25% of income for combined use of electric and gas. The aggregate value of electric and gas bills that exceeds 25% of income is estimated to be about \$67 million. The available funding of \$42.1 million in benefits could cover about 63% of the unaffordable amount for low-income households if it were targeted to households with energy bills greater than 25% of income.

These statistics demonstrate that the Connecticut programs cover a significant share of the total low-income need, but do not meet the entire need from the three need standards examined. In addition, since we know that the programs do not require households to exceed these need thresholds to receive benefits, some of the funding is being allocated to households that do not exceed these need standards.

The Connecticut Department of Utility Control has provided information on the number of customers in arrearage forgiveness programs and the total balances ascribed to those customers for November 1, 2005 – April 15, 2006.

Utility	# Hardship Customers	Total Balance (mill \$)
The Southern Connecticut Gas Company	17,103	34.3
Yankee Gas Services Company	13,678	7.9
Connecticut Natural Gas Corporation	11,680	14.7
The Connecticut Light and Power Company	3,519	1.9
The United Illuminating Company	592	0.3
TOTAL	46,572	59.1

Given that the overall balance of customers in arrearage forgiveness agreements is \$59.1 million and the utilities reported furnishing about \$14 million in electric and gas benefits to eligible households for these programs, we can estimate that they had an overall success rate of 23.7%.

The Matching Payment Program run by Connecticut Light and Power and Yankee Gas, who are both owned by Northeast Utilities, was targeted for analysis by this study. This program is representative of all of the Connecticut utility arrearage forgiveness programs, as these programs are mandated by statute and therefore implemented similarly by each utility to achieve statewide equity. Some important features of these programs include:

- **DPUC Oversight** – The Connecticut Department of Public Utility Control has overall responsibility for setting arrearage forgiveness policy. Utilities file plans and reports jointly to the DPUC.



- Program Operations – Each utility is responsible for operation of the program, including systems for program intake, benefit determination, and financial reporting.
- Program Funding/Participation – Overall funding for the programs for 2005 was about \$14 million. The natural gas programs were funded by rates and the electric programs by a system benefits charge.
- Benefit Type – The programs consist of an arrearage forgiveness plan only, enacted through matching payments.

The following table furnishes detailed information on the Connecticut Light and Power and Yankee Gas Matching Payment Program.

<b>Program State</b>	Connecticut
<b>Program Name</b>	Matching Payment Program
<b>Utility Company (If Applicable)</b>	Connecticut Light & Power and Yankee Gas
<b>Program Goals</b>	Allow customers to pay off arrearages over time.
<b>Funding Source (SBC or Rates)</b>	SBC
<b>Annual Program Funds – Allocated (2005)</b>	Yankee Gas: 4 million (approx.)
<b>Annual Program Funds – Expended (2005)</b>	Yankee Gas: 2.9 million
<b># of Households Served (2005)</b>	Yankee Gas: 4,822
<b>Participation Limit (Maximum # of Enrollees)</b>	No maximum; participation depends on funding
<b>Eligibility – % of Poverty Level</b>	Gross annual household income at or below 200% of poverty or 60% of the state median income.
<b>Eligibility – Other Criteria</b>	A client must apply for and receive all energy assistance for which they are eligible. Clients signing up with the Connecticut Light & Power program must heat with electricity*; those signing up with Yankee Gas must heat with gas. Customers must choose one program only. * Connecticut Light & Power also offers the smaller NUSstart arrearage forgiveness program for those who do not heat with electricity. In this program, customers receive monthly forgiveness of \$10 - \$49 for every budget payment.
<b>Targeted Groups</b>	Low-income customers with arrearages who are using energy assistance.
<b>Benefit Calculation Type (% of Income, Benefit Matrix, etc.)</b>	None (arrearage forgiveness only).
<b>Benefit Calculation (Document Formula)</b>	Not applicable
<b>Benefit Amount (Mean Subsidy)</b>	Not applicable
<b>Benefit Limit</b>	Not applicable
<b>% of Program Dollars Spent on Administrative Costs</b>	Not available (cost absorbed into portion of two full –time positions at utility)
<b>Benefit Distribution (Fixed Payment, Fixed Payment with a Limit, Fixed Credit, Fixed Credit with Budget Billing, etc.)</b>	Not applicable
<b>Arrearage Forgiveness Plan – Y/N</b>	Yes.
<b>Amount Eligible for</b>	Unlimited. All arrears are eligible for forgiveness under this program, but customers cannot accrue

<b>Forgiveness (Dollars, %, or Unlimited)</b>	credit on their accounts.
<b>Forgiveness Requirement (Payments, On-Time Payments)</b>	<p><u>Winter</u></p> <p>If a customer receives assistance, enters into a payment agreement and makes all required payments by April 30, the utility will match the amount the customer paid (including the amount of energy assistance) with a bill credit of equal amount.</p> <p><u>Summer</u></p> <p>If a customer has participated in the winter program (and successfully completed his or her winter payments), and if the customer makes all summer payments by October 31, the utility will provide a matching credit of equal amount.</p> <p>Monthly payment agreement is calculated by taking 12 months' usage, subtracting estimated energy assistance payments and dividing the difference by 12. Customers must make minimum payments to successfully complete the program.</p> <p><u>Below Budget Plan</u></p> <p>Customers have the option to fill out an Income/Expense Budget Calculation worksheet with an agency employee to determine if they are allowed a payment as low as \$50 a month. However, the difference between this payment and the actual payment will be added to the total arrearage.</p>
<b>Forgiveness Period (One-Time, 12 months, 24 months, etc.)</b>	Two six month periods (November 1 through April 30, May 1 through October 31)
<b>Program Manager (PUC, State, Utility)</b>	Connecticut Light & Power and Yankee Gas
<b>Data Manager (PUC, State, Utility, Other)</b>	Connecticut Light & Power and Yankee Gas
<b>Enrollment Responsibility (Utility, CAP, etc.)</b>	Connecticut Light & Power and Yankee Gas
<b>Application Method (Mail, In-Person, Phone)</b>	In-person, by mail or by phone, either directly with the utility or through the local community action agency
<b>Joint Application</b>	Each state utility administers its own application process.
<b>Recertification Required – Y/N</b>	Yes.
<b>Recertification Frequency</b>	Annual.
<b>Recertification Method (Agency, Automatic Enrollment, Self-Certification)</b>	Automatic Enrollment, but must apply for and receive energy assistance to qualify.
<b>Recertification Procedures</b>	If a customer received energy assistance in the year prior and has an arrearage, the utility sends a letter in the fall saying they are enrolled in the Matching Payment Plan given they again apply for energy assistance.
<b>Removal Reasons</b>	<ol style="list-style-type: none"> <li>1) Failure to make required monthly payments.</li> <li>2) Voluntarily withdrawal from the program.</li> <li>3) Failure to apply for and receive energy assistance (leading to incomplete application or removal)</li> </ol>
<b>Other Communications</b>	None.
<b>Budget Counseling</b>	Money Matters program funded by utility is available throughout the state every month. This course is conducted by the utilities and trained CAA workers and is urged but not mandated.
<b>Evaluation Frequency</b>	None yet.
<b>Coordination with LIHEAP</b>	Yes, a client must apply for all energy assistance for which they are eligible.
<b>Coordination with WAP</b>	If apply for LIHEAP, are put on list for WAP.
<b>Coordination with Energy Efficiency Programs</b>	Share lists of customers to target. CAAs are asked to make sure clients apply to all programs simultaneously, including WRAP, when they apply for energy assistance and the Matching Payment Program.
<b>Coordination with Other Energy Affordability Programs</b>	All utility programs file jointly with the state of Connecticut.

## V. Affordability Program Evaluation Findings

The Arrearage Forgiveness programs have not been evaluated.

## VI. Low-Income Energy Efficiency Programs

The three major sources of funding for energy efficiency programs available to low-income households in Connecticut are the DOE Weatherization Assistance Program (WAP), the LIHEAP Program, and utility energy efficiency programs.

- DOE WAP Program – In 2005, Connecticut received about \$2.5 million in funding for the Weatherization Program. These funds were distributed to local agencies to deliver weatherization services to low-income households.<sup>66</sup>
- LIHEAP Program – In 2005, Connecticut elected to use about \$1.25 million (2.6%) of its LIHEAP funding for heating system replacement.
- Utility Energy Efficiency Programs – In 2005, Connecticut utility energy efficiency programs (including WRAP and UI Helps) were funded at a level of about \$7.2 million.<sup>67</sup>

In total, about \$11 million was available to help furnish energy efficiency services to low income households in Connecticut.

It is a little more challenging to estimate the need for energy efficiency programs. In general, we would suggest that energy efficiency programs should be used in place of affordability programs when the energy efficiency programs result in cost-effective savings to the household. The literature on energy efficiency programs demonstrates that programs that target high users achieve the highest savings levels and are the most-effective. For electric baseload, programs that target households that use 8,000 kWh or more are most cost-effective. For electric heating, programs that target households that use 16,000 or more kWh are most cost-effective. For gas heating, programs that target households that use 1,200 or more therms are most cost-effective.

Our primary state-level data source, the ACS, does not ask respondents to report on the amount of electricity or natural gas that they use. However, we can develop a proxy for usage based on the respondent's estimate of the household's electric and gas bill. [Note: kWh price = 13.64 cents, therm price = 1.624].

Using the ACS data, we developed estimates of the number of households that would be eligible for energy efficiency programs using the cost-effectiveness targets. Table 10 shows that 36% of households could be targeted for high baseload bills, 21% could be targeted for high electric heat bills, and 23% could be target for high gas usage.

**Table 10**  
**Need for Energy Efficiency Programs for Low-Income Households (2005)**

Group	Number of Households with Bills	Number of Households with High Bills	Percent of Households with High Bills
Electric Baseload Services	124,122	44,408	36%

<sup>66</sup> Source: LIHEAP Clearinghouse

<sup>67</sup> Source: DPUC

Group	Number of Households with Bills	Number of Households with High Bills	Percent of Households with High Bills
Electric Heating Services	33,800	7,040	21%
Gas Heating Services	51,597	22,844	23%

Source: 2005 ACS

In general, low income weatherization programs spend about \$3,000 per unit, including all costs for administration and service delivery. With the available funds, Connecticut could serve about 3,667 low-income households, or about 12% of the high usage homes needing weatherization assistance and about 8% of the homes that need electric baseload services.

Some important features of WRAP (Weatherization Residential Assistance Program) include:

- WRAP Program Administration – Connecticut Light & Power administers this program in partnership with the three Connecticut gas utilities: Yankee Gas, Connecticut Natural Gas and Southern Connecticut Gas. All utilities in Connecticut file a joint plan.
- Funding/Service Delivery – In 2005, WRAP was funded at the level of about \$5.9 million. Connecticut Light & Power was funded through an SBC; the gas utilities were funded through rates. The program delivered services to about 8,500 customers.
- Demographic/Program Targeting – WRAP targets not only low-income customers, but also other vulnerable groups such as seniors and those who speak a language other than English at home. WRAP also targets electrically heated homes in order to reach those who would achieve substantial savings.
- WAP Office Collaboration – The program engages in cost sharing with the Department of Social Services to widen the base of covered households.

The following table furnishes detailed information on WRAP.

Program State	Connecticut
Program Name	WRAP (Weatherization Residential Assistance Partnership)
Utility Company (If Applicable)	Connecticut Light & Power, Connecticut Natural Gas, Southern Connecticut Gas*, Yankee Gas Southern Connecticut Gas's program is called "Limit the Gap", but is run the same as WRAP
Program Goals	To help low income, high usage customers with conservation services that safely lower electric usage and reduce the home's heat loss in winter and heat gain in summer.  <u>Electric Savings Goals 2005</u> Goal: 113,022 mWh lifetime Actual: 107,224 mWh lifetime  <u>Electric Savings Goals 2006</u> Goal: 88,603 mWh lifetime Actual: 105089 mWh lifetime
Funding Source (SBC or Rates)	SBC for CL&P (electric); Rates for CNG, SCG and Yankee Gas (gas)
Annual Program Funds – Allocated (2006)	<u>Electric</u> 2005: 5,891,143; 2006: 5,851,000  <u>Gas</u> 2005: 800,000 (approx.); 2006: 800,000 (approx.)
Annual Program Funds – Expended (2006)	<u>Electric</u> 2005: 4,682,547*; 2006: 5,299,000      *Funds received late in program year

	Gas 2005: 800,000 (approx.); 2006: 1,103,299
# of Households Served (2006)	Electric 2005: 7517 (target 9818); 2006: 10,481 (target 10,192)  Gas 2005: Not available; 2006: 1000 (approx.)
Participation Limit	None, just a function of the budget
Eligibility – % of Poverty Level	At or below 60% of state median income
Eligibility – Home Type	No restrictions
Eligibility – Energy Usage	> 2000 kWh annually, but can be flexible, no restriction for gas utilities
Eligibility – Participation in Energy Assistance	Not required.
Eligibility – Other Criteria	Both renters and homeowners are eligible.
Targeted Groups	Low-income customers who are high energy users, all electric users, seniors, groups speaking a language other than English
Measure Determination	In-home energy conservation needs assessment
Mean Costs per Home (2006)	Electric 2005: 477; 2006: 506  Gas 2005: 1000 (approx.); 2006: 1000 (approx.)
Targeted Average Cost (2006)	Electric 2005: No specified target; 2006: 500 (approx.)
Cost Limit	If the cost reaches 1500, the agencies need to call and get approval. If the heating system is being replaced, costs are capped at 4000.
Landlord Contribution	Landlord must give signed permission. Contribution depends on measure: <ul style="list-style-type: none"> <li>- Refrigerator replacement: \$100 co-pay</li> <li>- Window replacement for all electric household: 30%</li> </ul>
% of Program Dollars Spent on Administrative Costs	Utility administration costs: 8% Agency administration costs are not separated out from implementation.
Efficiency Measures	Customers may receive some or all of the following: <ul style="list-style-type: none"> <li>- Compact fluorescent bulbs, energy-efficient table lamps, fluorescent fixtures</li> <li>- Energy-efficient shower heads</li> <li>- Replacement of older inefficient refrigerators with energy-efficient units</li> <li>- Room air conditioning units</li> <li>- Wall and attic insulation and air sealing</li> <li>- As budget allows, heating system replacement for gas customers</li> </ul>
Customer Education – Y/N	Yes
Education as Part of Service Delivery – Y/N	Yes
Education Separate from Service Delivery – Y/N	Cross promotion with customer relations programs that include energy conservation workshops
Follow-Up with Customers – Y/N	Yes
Program Manager (PUC, State, Utility)	Connecticut Light & Power
Data Manager (PUC, State, Utility, Other)	Connecticut Light & Power
Enrollment Responsibility (Utility, CAP, etc.)	Connecticut Light & Power is responsible for enrollment, works with Community Action Agencies to implement program
Number of Provider Agencies and/or Contractors	Five community action agencies, four of whom subcontract Work with seven other community action agencies to recruit customers who are then referred to the utility
Type of Provider (For-Profit, CAA, etc.)	Nonprofit Community Action Agencies For-Profit Subcontractors
Application Method	1) In person at community action agency

<b>(Mail, In-Person, Telephone)</b>	2) Through call center and mailed-out form 3) Direct mail from the utility 4) Online
<b>Joint Application</b>	Not yet, but in discussions to streamline process.
<b>Reasons for Service Denial</b>	Above income Excessive structural damage to unit (based on the assessment of those in the field) Received WRAP within the last 18 months
<b>Type of Follow-Up</b>	Customer survey once order is completed to check if all measures were delivered and report on the performance of the installers.
<b>Quality Control (Inspections?, etc.)</b>	Quality inspection of vendor work for sample of customers (about 10%)
<b>Evaluation Frequency</b>	2005 Process Evaluation by Nexus Market Research; none prior to this in recent history
<b>Coordination with LIHEAP</b>	No.
<b>Coordination with WAP</b>	Cost sharing with WAP, provide supplemental funding to Department of Social Services
<b>Coordination with Energy Affordability Programs</b>	Share lists of customers to target
<b>Coordination with Other Energy Efficiency Programs</b>	Work with UI-HELPS is customer is in shared territory. If doing gas weatherization, might also provide electric measures and then bill UI.

Some important features of UI Helps include:

- **UI Helps Program Administration** – United Illuminating administers this program, though all utilities in Connecticut file a joint plan.
- **Funding/Service Delivery** – In 2005, WRAP UI Helps was funded at the level of about \$1.5 million, through an SBC. The program delivered services to about 8,600 customers.
- **Demographic/Program Targeting** – The program targets low-income high burden households, as well as elderly and financially challenged customers.
- **WAP Office Collaboration** – The program engages in cost sharing with the Department of Social Services to widen the base of covered households.

The following table furnishes detailed information on UI Helps.

<b>Program State</b>	Connecticut
<b>Program Name</b>	UI HELPS
<b>Utility Company (If Applicable)</b>	The United Illuminating Company
<b>Program Goals</b>	To provide comprehensive weatherization, energy conservation and education services to low-income customers in order to reduce their energy burden To make utility bills more affordable, and houses more energy-efficient and comfortable
<b>Funding Source (SBC or Rates)</b>	SBC (Line item for Conservation and Load Management)
<b>Annual Program Funds – Allocated (2006)</b>	2006: 1,327,853; 2005: 1,473,399
<b>Annual Program Funds – Expended (2006)</b>	2006: 1,249,556; 2005: 1,085,779
<b># of Households Served (2005)</b>	2006: 6116 (target 6500); 2005: 8603 (target 6500)
<b>Participation Limit</b>	As funds allow

<b>Eligibility – % of Poverty Level</b>	At or below 60% of state median income
<b>Eligibility – Home Type</b>	No restrictions, single and multifamily housing eligible
<b>Eligibility – Energy Usage</b>	No restrictions, though targeting households that are all electric
<b>Eligibility – Participation in Energy Assistance</b>	No restrictions
<b>Eligibility – Other Criteria</b>	Customer must directly pay electric bill
<b>Targeted Groups</b>	Low-income customers with a high energy burden, elderly customers, financially challenged
<b>Measure Determination</b>	In-home energy conservation needs assessment
<b>Mean Costs per Home (2006)</b>	2005: 177; 2006: 204. Low costs from servicing all electric homes only
<b>Targeted Average Cost (2006)</b>	Not available
<b>Cost Limit</b>	Not applicable
<b>Landlord Contribution</b>	Measures that are landlord-owned (e.g. refrigerators and air conditioning units) are cost-shared. Landlords contribute 50%, up to \$150.
<b>% of Program Dollars Spent on Administrative Costs</b>	10% for internal overhead
<b>Efficiency Measures</b>	<p>Customers may receive some or all of the following:</p> <ul style="list-style-type: none"> <li>- Compact fluorescent bulbs and lighting fixtures</li> <li>- Water heater wraps, low-flow showerheads and faucet aerators, waterbed insulated covers</li> <li>- Door sweeps, thermostats, duct sealing, insulation</li> <li>- Replacement of older inefficient refrigerators and air conditioners with energy-efficient units</li> </ul>
<b>Customer Education – Y/N</b>	Y
<b>Education as Part of Service Delivery – Y/N</b>	Y
<b>Education Separate from Service Delivery – Y/N</b>	Partnership with agency to provide energy education workshops
<b>Follow-Up with Customers – Y/N</b>	Y
<b>Program Manager (PUC, State, Utility)</b>	The United Illuminating Company
<b>Data Manager (PUC, State, Utility, Other)</b>	The United Illuminating Company
<b>Enrollment Responsibility (Utility, CAP, etc.)</b>	The United Illuminating Company
<b>Number of Provider Agencies and/or Contractors</b>	2 Community Action Agencies and 1 vendor
<b>Type of Provider (For-Profit, CAA, etc.)</b>	Nonprofit agencies and for-profit vendor
<b>Application Method (Mail, In-Person, Telephone)</b>	The United Illuminating Company and LIHEAP, by mail, telephone and in person. Share information between utility and agencies through utility supported web-accessible data tracking program.
<b>Joint Application</b>	No, but there is coordination (see below)
<b>Reasons for Service Denial</b>	<p>Above income</p> <p>Has been in the program in the last 18 months</p>
<b>Type of Follow-Up</b>	Customer satisfaction telephone surveys for 10-15% of customers
<b>Quality Control (Inspections?, etc.)</b>	In-home inspections for sample of customers
<b>Evaluation Frequency</b>	2005 Process Evaluation by Nexus Market Research; none prior to this in recent history
<b>Coordination with LIHEAP</b>	UI Helps information is included with LIHEAP outreach
<b>Coordination with WAP</b>	Cost sharing with WAP, provide supplemental funding to Department of Social Services

Coordination with Energy Affordability Programs	Share lists of customers to target
Coordination with Other Energy Efficiency Programs	Work with Southern Connecticut Gas if customer is in shared territory. Engage in cost sharing to provide comprehensive coverage.

## VII. Energy Efficiency Program Evaluation Findings

A joint process evaluation of WRAP and UI Helps was conducted by Nexus Market Research in 2005. Some of the key findings of that evaluation include:

- **Program Structure and Delivery:** The evaluation recommended that the program continue to work on efforts to coordinate delivery of ratepayer-funded program services with the delivery of publicly-funded program services (e.g., WAP).
- **Targeting and Outreach:** The evaluation recommended restricting the program to the lowest income households (i.e., incomes at or below 150% of poverty), targeting electric heat households, and conducting outreach to non-English speaking households.
- **Quality Control:** While the programs currently have quality control standards, the evaluation identified some standards that are more consistent with "best practices."
- **Longer Term Issues:** The evaluation suggested that there are important questions about the level of investment per home and the coordination of services among all of the Connecticut programs that should be addressed by the program managers in conjunction with the larger energy efficiency policy community.

While the evaluation did not measure impacts, it did speculate that the program could have a greater impact by focusing more resources on fewer households.